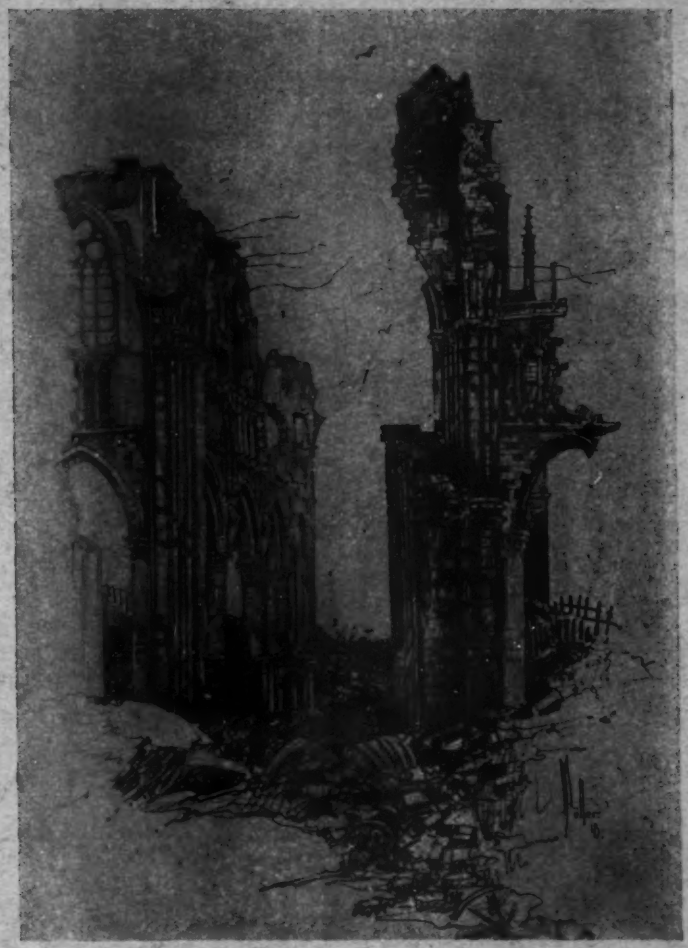
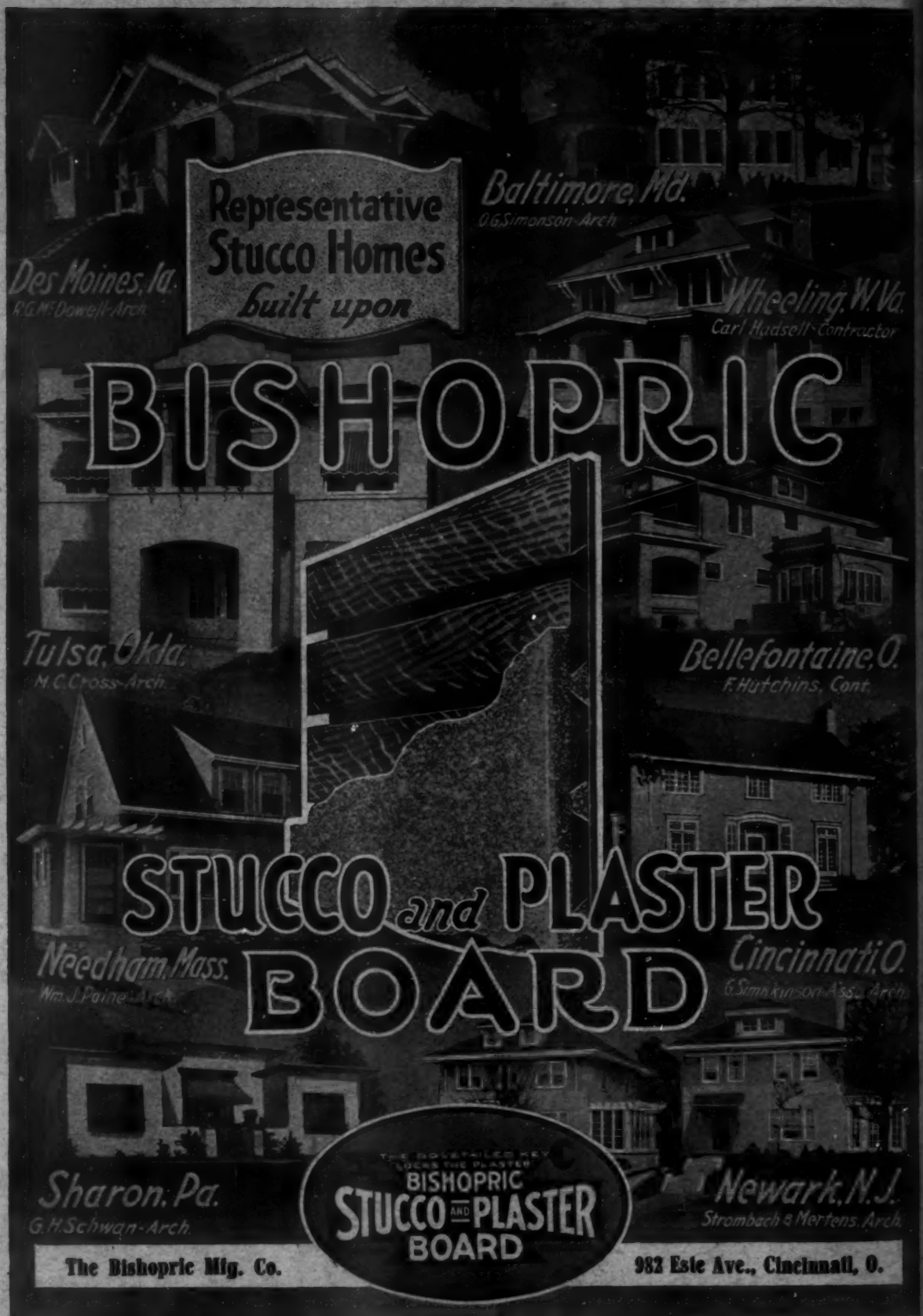
THE AMERICAN ARCHITECT

WILMINGTON INSTITUTE
MAR 13 1920
FREE LIBRARY



YPRES IN RUINS
Part of the Cathedral Church of St. Martin
Drawn by R. E. Miller

PUBLISHED WEDNESDAYS IN NEW YORK
FOUNDED EIGHTEEN HUNDRED SEVENTY SIX
VOLUME CXVII FEBRUARY 11, 1920 NUMBER 2303



The American Architect, published weekly at 243 West 39th Street, New York, N. Y. Entered as second class matter January 6th, 1909, at the Post Office at New York, N. Y., under the act of March 3rd, 1879. Subscription price in the United States and Possessions, $10.00 per year. Issue No. 2303 dated February 11, 1920.

SPANISH ARMOR, PERIOD OF CHARLES V.

THE AMERICAN ARCHITECT

VOL. CXVII WEDNESDAY, FEBRUARY 11, 1920 NUMBER 2303

The Architect and the Government

By GLENN BROWN, *F. A. I. A.*

THE Government officials with whom the architect has to deal, whether it be the legislator, a Cabinet officer or a bureau chief, are typical citizens, chosen because they have demonstrated in some line their capacity and fitness. With few exceptions they are striving to secure the best results for their masters, the people, and bow gracefully when the public emphatically expresses an opinion. They follow the voice of their constituents, rarely attempting to guide them and are anxious to secure the best for the public.

Their experience has made few of them familiar with the fine arts, just as only a limited number have knowledge of great financial transactions or engineering schemes. They are generally open to enlightenment; their ambition is to see the United States progress, become the leading influence for good in the world in all lines. Show them or impress their constituents with the practical importance of the fine arts and they will become partisans.

Government work in the fine arts, because of its usual importance and magnitude, will exemplify and measure our culture and enlightenment to future nations and generations. With our future standing at stake it is vital to our good reputation to secure the best in sculpture, painting and architecture when the Government is the client. There is no dearth of talent, for we have individuals practicing each of the arts not surpassed in the world. The important factor is to get the Government to use the services of these men and we need not fear the results.

How to impress the people and the official with the value of such service is the question.

In my first paper I explained how the American Institute of Architects accomplished this for a period of twelve years. In recent years the organization, judging from convention and committee reports, has lost the public confidence and failed to impress officials with the value of its service. This became conspicuously manifest during the war, but the seeds of distrust and disintegration were planted and allowed to grow some years before the war began.

From the seed of disintegration have sprung weeds choking off valuable plants. The results may be seen in divided and multiplied authority, distrust in the capacity of architects shown in selecting outsiders for important offices, and delegating independent authority to committees and individuals.

The case of Cass Gilbert illustrates their blighting effect. Here was an architect whose efficient service is lost to the organization, a man of affairs, eminent in knowledge of construction, brilliant in plan and design, upholding to his personal detriment the strict ethical rules and giving unstintingly of his talents and time in the public service.

For many years I was intimate with and appreciated his value to the profession and the public as shown in his work as director and president of the Institute.

He stood for zeal and enthusiasm in public service, justice and right in business, the highest ideals in art; holding to the big things and wiping aside the exploitation of trivial and non-essential things.

No one did more than he to give the Institute prestige, or secure the confidence of Government officials by his intelligent and business-like presentation of a subject; by his diplomacy and, when required, by his aggressive fighting qualities. How was he rewarded? There was an active clique in the Society, the same who transferred the important offices of the Institute to outsiders, overanxious to guard the morals of others, who made a personal attack on Gilbert. His advice was ignored, his wise and farsighted policies were abandoned, his attitude was misunderstood, and his own sacrifices counted for nothing. The attack came to nothing, but left a deep sense of disgust and injustice. This snapping at Gilbert's heels continued, but he withstood the exasperating personal pricks until methods which he and many others considered detri-

Copyright 1920, The Architectural & Building Press (Inc.)

mental to the morale of the profession were inaugurated, when he resigned.

This growth from the seed of disintegration started by borrowing from the reserve fund to help pay an increase of some $10,000 in office and Journal salaries. It seems doubtful from a statement by the treasurer whether three thousand of this was a loan or a gift not to be returned, and the auditors fail to show it in their account of the reserve fund.

The reserve fund was started by Cass Gilbert when he was president, with the idea of eventually providing an endowment that would at least pay for the maintenance of *The Octagon* and possibly the office expenses of the Institute, hoping that it would finally pay all expenses and put the Institute on a plane with the National Academy of Design. Gilbert wrote a serious letter to the president, T. R. Kimball, explaining the origin and purpose of the fund and objecting to its dissipation through gift or loan.

The following discussion occurred at the Nashville Convention on the subject:

The Chairman (Mr. Waid), in his statement, said: "It is a satisfaction to have a letter that has come to my knowledge, addressed to President Kimball from Cass Gilbert, who was first instrumental in establishing this fund. The letter is so long that unless requested I believe we had better not take time to read it."

Mr. Pond: "Is it along the same line in favor of withdrawing from the fund $10,000?"

Mr. Waid: "This does not touch that particular point, and there is nothing in the record to prevent the Convention withdrawing the money . . . or even appropriating it outright." . . .

Mr. Du Fais: "Mr. Gilbert has written a letter on that subject to the president, which, I believe, he would permit me to read." . . .

The Chairman (Mr. Waid): "That is a letter that was so long and we were so pressed for time" . . .

Mr. Du Fais finally got the letter before the Convention; it took between three and four minutes to read. It was a serious letter, giving the cause and history of the reserve fund, what it was expected to accomplish and his opposition to its being used for current expense. After further discussion, the resolution was carried by a vote of 83 to 40, receiving two votes above the necessary two-thirds to carry. With the doubt expressed frequently on the floor as to who had a right to vote and the doubt expressed on how to vote proxies, one cannot help wondering if it legally passed. Gilbert and other members who had been fostering this fund were shocked at the growth from this weed which was reaching out and sapping the strength of a nobler growth.

The weed continued its rank growth, oozing out poison in the form of an editorial, easily construed from the assertion, "Every vested right is in reality a vested wrong," as a bolsheviki document, striking at the fundamentals of our Government. This was such a grave offense, placing the organization and the profession in such a false position with officials and the people that Gilbert wrote the president, demanding the writer be removed if an employee of the Institute. This was answered in a perfunctory way by the president.

The Board in Nashville states: "The responsibility for the editorial is shared by the president, the committee on publication and the editor. Regardless of whether or not the article in question expresses the opinion of the Institute and without consideration of its merits or demerits . . . the Board believes such an article was not of the type which should be published in the Journal. Therefore, the Board instructs the Committee on Publication that the columns of the Journal should (a weak command) not be devoted to matters which may become the subject of political or religious controversy."

With this official statement that the president and Board, equally with the editor, were responsible for exploiting such principles, Gilbert, as others have done, felt that he was unwilling to be made a party to such pernicious principles through membership in the organization and resigned about the middle of May. This demonstrates the effect of the management produced by the influence of the non-professional which has apparently dominated the professional for several years.

This weed, with its tangled growth, has cut the Institute off from the great oak whose fame had been a landmark known to the world for its strength and nobility, whose outspread branches had sheltered the profession in storm and stress, always standing firmly in its dignity and purity. This seed of disintegration, producing divided authority and distrust in the efficiency of its own members, produced the resignation, I understand, of men like Thomas C. Young, of Eames & Young, St. Louis, and of Breck Trowbridge, of Trowbridge & Livingston, New York, nationally known for their efficiency and ability, and caused many other members of standing to cease participating in Society affairs.

From the seed of intolerance, insisting on rule and regulation for the conduct both of the profession and the public, have grown vines strangling public confidence.

A healthy plant had sprung from the public confidence of the Secretary of the Treasury in the Institute's management and ideals. It had become

the custom of the Secretary to call in the officers of the Institute for advice on architecture and the other fine arts, and he usually followed their advice. In a system just beginning at the time of taking authority from the official staff and vesting it in regulating committees, a large committee was empowered to confer with the Secretary of the Treasury, excluding from the committee all who had become familiar with the wants of officials. This conference was on competitions and the relations between the Supervising Architect's Office and the private practitioner. The delegation made uncalled-for demands and were so infatuated with their rules and regulations that they were intolerant of suggestion.

This conference was the last opportunity the Institute had to exercise its influence for the public good through the Secretary of the Treasury, as neither its officers or members were called on again.

The pendulum swung so far the other way that when the last supervising architect was displaced a lawyer was made acting supervising architect. Although several years have passed the lawyer still holds the office. The Assistant Secretary, after experience with a supposedly inefficient architect and the intolerance of Institute advice, believes, although we know he is mistaken, that the office can be managed more effectively without an architect. It is a stinging reprimand to the profession, which we know is not deserved. Thus this lusty plant of confidence has been sapped and killed by the weed of intolerance.

From the seed of exclusiveness, belief that architects should confine their efforts to the artistic, has sprung a rank weed with hypnotic influence, convincing the public that the architect's vision is in the clouds and cannot be brought down to common ordinary mundane affairs.

What might have been the disastrous effects of this policy is illustrated by one of the campaigns for the Lincoln Memorial. The management of the Institute instructed (the disintegration had begun) the Secretary to confine his efforts to the importance of the artistic side of the question and to ignore the practical questions involved when presenting the case for final decision on the floor of the House of Representatives, between a Memorial to Lincoln expressed in a Public Highway to Gettysburg, and the classic structure shown as an important part of the composition of the Mall. In the face of instructions to the contrary, I determined to show the practical side of the question, as I knew the majority of Congress, just as a majority of the people, would appreciate more clearly the practical questions involved than they would the artistic.

The attorney for the Automobile and Highway Associations was proposing a second Appian Way to last centuries, making very impressive propaganda to enthuse Congress and the people. I investigated the construction of the Appian Highway and made an estimate of what a similar roadway would cost at the time. This was before 1914, and I found it amounted to over $300,000,000. I secured an itemized estimate made by the Engineer Corps, U. S. A., for a memorial boulevard from Mt. Vernon to Washington. Taking the prices in this as a basis, I made a careful itemized estimate of the cost of a similar road from Washington to Gettysburg. This boulevard showed the lowest expression required of a Memorial Highway. A tabulated sheet was made showing the cost per yard of the different kinds of roadbed and surfacing, as well as the total number of yards required to complete the project. We found that such a highway would cost $20,000,000 and take $1,000,000 annually for maintenance. My data and estimates were submitted to Col. W. V. Judson, Eng. Corp, U. S. A., who had constructed the fine roads in Porto Rico and had charge of the streets and highways in the District of Columbia. Colonel Judson went over them and certified to their accuracy before the Congressional Committee. Then Col. A. Y. Worthington, one of Washington's most distinguished lawyers, agreed, *pro bono publico*, to take the practical data, the artistic considerations and to investigate the legal side and manage the case before the Committee, cross-questioning the engineers and others interested in the highway. He showed up plainly the $2,000,000 they were aiming to get would build a poor grade macadamized country road 15 feet wide instead of a cut-stone Appian Way, a commonplace memorial belittling the name of Lincoln. This data before the Committee was printed and presented to the House just before the question was brought up on the floor, where it was handled in a masterly way by Representative Lynden Evans, of Chicago.

I was told by the attorney for the other side, representing Highway and Automobile Associations, that we won on the practical data, handled in a competent way by Colonel Worthington and Representative Evans. I can well believe this to be a fact, as Senator Elihu Root and Representative Slayden, of the Library Committee, both believing in our side, told me two weeks before the question came up in the House and before our data was published that we would lose out in the House. This shows how the weed of exclusiveness may be killed by the application of ordinary common sense.

From the seed of shirking, avoiding the performance of duty, of the same genus as the weed exclusiveness, springs the transfer of responsibility in construction, sanitation, decoration and land-

scape. These weeds, widely disseminated, have poisoned the public mind with the idea that the only function of the architect is to design ornamental features and make pretty pictures, which the public think non-essential or trivial. This opinion would be just if that was the only way in which an architect made himself useful.

During war-times the profession was needed in the interest of the public as no class was as well qualified to plan, construct and economically manage building operations as the qualified architect. But the weed shirking has choked public confidence and the people have lost the benefit of efficient architectural service.

The experience of one architect well illustrates the effects of this growth. He was an architect of long practice who had designed machine shops, bridges, dwellings, department stores, office buildings, difficult foundations in quicksands and in water, landscape and roadways, who was an authority on plumbing and heating and made his own structural details, computing strains on trusses, arches, retaining walls, and who personally supervised his work. This architect thought his services would be useful in war work and was eager to have a hand in downing the boches. He thought it was only necessary to offer his services and that they would gladly be accepted. After many interviews with officials in the War Department, the Navy Department and Special Boards he found that he was not wanted. The reason in every case was that they wanted practical men, engineers and builders, and turned a deaf ear to any explanation as to the practical efficiency of the architect. This architect determined to stand a civil service examination for superintendent of construction. He filled in his papers as instructed and had the endorsement of five well-known architects. After about three months a notice was received from the Civil Service Commission, stating, "Your application has been cancelled for lack of experience." This seemed so ridiculous to an architect who had been actively designing and superintending all classes of construction for thirty years that he went with fire in his eye to the Civil Service Commissioner. They referred him to one of the examiners.

The applicant was told in effect that they did not want architects. They wanted engineers, as they were practical men. They were asked if the work of this architect was not practical work. The reply was, "We all know an architect has nothing to do with the structural work or the superintendence of his buildings. He only makes drawings for the ornamental parts. We do not consider the endorsement of architects (all the endorsers for this candidate were prominent architects) as they do not know anything about these practical questions."

Instead of appealing this, on the face of it, unjust decision, which would have taken four or five months passing through the various boards, the architect determined to stand for four similar positions, in which the circular stated they were much in need of capable men: one under the Army, one under the Navy and one at large. In this case he swore to the fact that he designed and superintended his structures, enumerating machine shops, bridges and buildings where that had been the case. Instead of architects to endorse him, he got structural engineers, railroad engineers and a sanitary engineer who knew he was a practical man.

After several months he received a rating—85 the lowest and 95 the highest—on these three examinations. The lowest rating because he had no degree in engineering.

Although his name, being very near the top, was certified to the officials in the departments wanting such help, nothing was heard from them for months, and in the meantime the armistice was signed.

The officials probably selected some one calling himself engineer, although the rating may have been lower, instead of the applicant calling himself an architect.

This case clearly shows how the weed of shirking responsibility as practiced by some architects, but never tolerated by the men who have been most successful and of the greatest public service, has been allowed to grow where it is fast poisoning public opinion and sapping public confidence.

Let us as individual architects and the Institute as the society of architects root up the weeds that have grown in rich ground and replant and sedulously cultivate useful and nourishing plants.

The Post-War Committee, to which apparently everything relating to the Institute and the individual practitioner has been referred, is making an effort to do this rooting up and replanting.

In the next article I propose to treat of the problems which they have had under discussion.

Civic Centers in New England

By OLIVER H. HOWE, M.D.

MUCH of the attractiveness and dignity of our New England towns consists in the possession of a civic center. Guided to it by the white spire of a Colonial church or by the tasteful and dignified tower of a town hall, we find a green with trees or shrubbery, about which are grouped the principal public buildings of the town. We immediately feel that here is expressed the true personality of the community. Other towns may have well-shaded streets and attractive residences, but if the public buildings are scattered along a main street, so that no two of them can be seen at once, we seek in vain for the center and feel that a civic and artistic opportunity has been lost.

Such a center should be at or near the center of population and movement. If principal streets radiate from it, public convenience will be served properly to see the buildings and enjoy their architecture, for if placed close to a narrow street or obscured by foliage they lose much of their charm. Moreover, churches, schools and libraries require some isolation to secure the necessary quiet.

The several buildings of the group should be harmonious in architecture and purpose, should face properly with relation to each other and the locality should be free from unsightly construction. Buildings excellent in themselves, if too dissimilar in style or material, may destroy all good effect by unpleasant contrast. It is unwise to place beside a plain Colonial building, a decorated Gothic or Ro-

THE SPRINGFIELD, MASS., MUNICIPAL BUILDINGS

PELL & CORBETT, *ARCHITECTS*

and the situation will be recognized as well planned and logical. It should be visible from the main highway, so that every tourist may see and appreciate the personality of the town. Sometimes, as in Warren, Massachusetts, the civic center is grouped about the railroad station and if the group be attractive, a passing glimpse will favorably impress the traveler by train.

A civic center should preferably be on a slight eminence, so as to give dignity to the buildings. Level ground is less advantageous, although often necessary. A hollow is always disadvantageous, although proper treatment may redeem it. A common or open space is necessary to give opportunity

manesque structure. Instances of this are too numerous to mention. Likewise a bright yellow brick building may seriously intrude in a group of quiet, low-toned stone or red brick structures. Buildings of a group may effectively face each other, but one building facing in the opposite direction may destroy the harmony of an otherwise admirable group.

The buildings most suitable for civic centers are town halls, churches, libraries, schools or academies, court houses, and post-office and bank buildings. Fire department and police headquarters may serve as subsidiary parts of the group, but should not be placed too prominently. An attractive hotel will

often add to the effectiveness and contribute an air of hospitality to the scene.

To form a pleasing combination, one building should dominate the group. It may be a massive town hall, or perhaps a church with lofty spire. Whatever it is, the chief interest should there be concentrated. Spacious grounds give the proper distinction to such a building and its tower or spire should not be hidden by trees. Residences with tasteful grounds always make a good setting for a civic center; and business blocks, if of good architecture and well kept, may form a part of the group. In large towns and cities the business center may more properly be separated by a little space from the civic center. Unfortunately, stores, business blocks and factories do much to mar civic groups by their ugly or ill-assorted architecture and their advertising features. A civic center should have repose and harmony and be free from ugly and distracting elements. If a common or park is included in the scheme, such open space should have a central point of interest; either a fountain, flagpole or memorial of some kind, or perhaps a bandstand, if tasteful and appropriate.

THE COMMON, RUTLAND, MASS.

A study of the different types of civic centers in New England may be of interest. A rectangular common with streets radiating from it and the public buildings grouped about it is the one seen at Foxborough, Massachusetts. The public library, hotel and three churches face the common and seven important streets radiate from it. A similar arrangement with rather narrow common is seen at Concord, Bridgewater and Shrewsbury, Mass., and Woodstock, Vt. Such an open space corresponds in position with the market-place seen in English towns, of which Ripon in Yorkshire furnishes a good example. The market-place, however, is generally paved and used for the display and sale of produce, while the New England common is a grass plot beautified with trees or shrubbery.

A more frequent type in New England is the long, narrow common with a street on each side of it, as at Amherst, Longmeadow and Cohasset, Mass. Sometimes the street is in the middle of the plot as at South Hingham, Mass., and in some instances on one side only, as at Williamstown, Mass. Such commons are frequently half a mile or more long. The widest example is that of Hadley, Mass., whose common is also a full mile in length. These commons were used as training fields in Colonial and revolutionary times and again recently by companies of the Massachusetts State Guard. A common of this type is admirably suited to display of the civic buildings if they are properly placed and many beautiful examples are found in New England, including Suffield and Enfield, Conn., and Stockbridge, Mass.

Another type of center is found where two main roads cross each other at right angles. If both streets are wide and the buildings have ample grounds, this type may be very attractive. A good example is found in Dedham, Mass., the county court house and registry building, occupying two corners and a Colonial church with its green a third corner.

Perhaps the most generally successful form of center is that where three main roads meet. Often a triangular common is found, upon which a Colonial meeting house or some other public building is placed. In other instances the common is an attractive open space. If no common exists, the fork of the road offers a particularly favorable site for a building. In such a location stands the city hall of Meriden, Conn. Occupying the brow of the hill, it is in full view for a half mile as it is approached by the main street. With the public library, high school and three churches as neighbors, all combine to make a civic center of which any city might be proud. The triangular intersection has decided advantages over the cross roads, for it is less formal and usually gives better display

PUBLIC SQUARE, DEDHAM, MASS.

of its buildings. Examples of this type are found in Wayland, Wrentham and East Bridgewater, Mass., and Jaffrey, N. H.

A similar favorable location for a building is found when one main street meets another in the form of a T. Trinity Church, New York has such a location and its front is seen to good advantage from any point in Wall Street. A building at the higher end of a narrow common is also favorably

A TYPICAL NEW ENGLAND COMMON

placed, as for instance the Academy at Bridgewater, Mass., and a Colonial church in North Attleboro, Mass.

Where the center must be on one straight street without prominent intersections, the problem is usually more difficult and seldom reaches so happy a result. Narrowness of the street and lack of space for set-back have spoiled the effectiveness of many a village group. An admirable solution was reached in the case of Lancaster, Mass., whose civic center is ideal in every respect. There is a rectangular common at the side of the main street and about this are a fine Colonial church designed by Bulfinch, a public library, a town hall and a high school. The magnificent municipal group in Springfield, Mass. has the same kind of plan. Beginning with a square park and an ancient Colonial meeting house, the city has built a city government building, an auditorium and a lofty clock-tower. Across the park is a fine court house and nearby is the fire department headquarters. In New Haven, Connecticut, the ample "green" forms an effective setting for three fine churches, offering a striking demonstration of the importance of proper spacing in such situations. The recent erection of a fine United States post-office and court house facing the churches, and of a city library at one side, are serving to evolve for New Haven a civic center of noble proportions. Milton, Mass., has a fine civic group. On a street of generous width are a town-hall and two churches and parish house, while in the rear are the high school and fire and police headquarters. Across the street and completing the group is a fine public library. The town hall in the center, standing on the highest ground, dominates the group, being flanked by a church on either side. These buildings are set back from the street about 100 feet and have ample space around them. The town of Leicester, Mass., has a similar arrangement, the town hall, two churches and high school occupying the summit of the high hill on which the town is built.

It is not desirable that every town should develop a civic center in precisely the same way—rather the contrary. Some towns have important natural features—a lake shore, a forest background, an attractive knoll or a rocky eminence, which may guide and enhance the civic arrangement and every advantage should be taken of such features, for they will conduce to individual charm and make it appear that the center grew there.

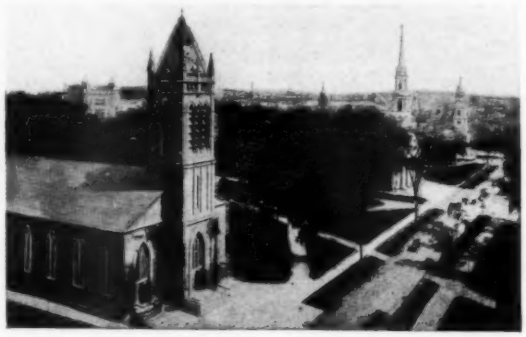
Some may question the wisdom of so much thought upon such a subject as this, in view of the fact that few towns can be planned in their entirety and that most communities have already occupied their land in such a way that changes are costly and impracticable. I would reply that many towns which I knew in my boyhood have since added important public buildings and developed situations which have greatly improved them as civic centers. Every town has to rebuild more or less as time goes on. The important thing is to see that such rebuild-

LANCASTER, MASS.

ing is wisely done, that it shall be fitting and appropriate for the situation involved, that it shall reflect credit upon the town possessing it and that, if possible, it shall enhance the beauty and significance of the structures already there. Often there is a choice of sites for a new building. If placed with relation to the civic center, it will enhance the effectiveness of the group, while if remotely placed, such bond of unity will be lost.

Various minor and less expensive changes may materially improve a town's civic center. Widening and straightening of streets, planting of trees or shrubbery, removal of unsightly buildings or fences, grading and improving of village greens, opening up of vistas, the addition of a flagstaff or fountain or the defining of a well-planned arrangement of paths; all are of this nature.

We are not careless about our dress or manners, for we know that other people will judge us by them. In the same way, the life and spirit of a town are judged by the character and appearance of its public buildings and by the taste displayed in their surroundings. If they show an inviting aspect to the world, the stranger will say: "Here is the abode of an intelligent and right-minded community. Its people have good taste and self-respect. I would like to know them better." Such good opinion as this is an asset for every town. It is not only worthy of thought and planning, but it will justify all the expense of its attainment.



THE CHURCHES ON THE GREEN, NEW HAVEN, CONN.

A city or large town may very readily have more than one center. If one group includes the town hall, court house and one or two churches, the other may contain school houses and library, or the churches may form a separate group if desired.

Each group should be large and important enough to be effective. Business centers in towns should also receive some thought and care, both on account of convenience and of creditable appearance. The buildings should harmonize well and the street intersection should be of ample width to indicate the importance of the locality.

A town that possesses a common or an ample lot of land for town buildings, although bare of other attractions, has a good nucleus for further improvement as from time to time other buildings are needed. Unfortunately in many instances public space has not been reserved and the community has become closely built up. There is frequently difficulty in obtaining additional land for public uses, not only because of the expense, but because the owners are unwilling to sell. Patient waiting, however, will sooner or later develop opportunities. I know an instance where a piece of property was tenaciously held by its owner for thirty years, but the time arrived when he was desirous to sell. Citizens grasped the opportunity, by combined effort the necessary amount was contributed and the scheme of town improvement was perfected. The greatest requisite is vision. Some public-minded individuals must look into the future and see the needs and possibilities that lie there. Everyone can recognize an improvement after it is made and many say, "Why did we not do this before?" The man that can see a transformation before it is unfolded and can patiently and persistently work for its accomplishment is the man most needed in town improvement to-day. There is a splendid field for village improvement societies. Stockbridge, Mass., was the pioneer in this kind of work, having formed the Laurel Hill Association in 1841. One can readily see how Stockbridge has been steadily moulded to lines of beauty, all its natural attractions conserved and a public sentiment created that constantly strives for the best things and insists on a high standard of civic life. Any town may easily have an improvement association provided the impulse to form one is present. A town that thus develops and improves its natural situation will not only maintain a high degree of self-respect, but will be recognized as a community of high ideals and genuine worth. It will become more desirable as a place of residence and its material prosperity will be in every way enhanced. It will develop a character and a personality which will reflect the taste and the public spirit of its citizens and which will be a joy to all who behold it.

Concrete, Its Use and Abuse

An Address Delivered Before the National Conference on Concrete Housing, Held in Chicago, February 17, 1920

By Irving K. Pond, *F.A.I.A.*
Past President of the American Institute of Architects

I HAVE written so much abstractly on architecture and architectural principles that it is good again to get down to hard and fast matters and fix my hypotheses in the concrete. I say "again," for many years ago as chairman of the Committee on the Allied Arts of the American Institute of Architects I was the author of a widely circulated report from that Committee dealing with concrete as a medium of architectural expression. I have had but slight occasion to put into practice the theories I then advanced, but I have continued to hold, and still maintain them.

Since that time the use of concrete in building operations has grown apace and enthusiasts and specialists have arisen to scatter their words and their works broadcast—sometimes, though not always, the words being more attractive than the works—sometimes the words and works alike bordering on the grammatically atrocious—as, for instance, when the beauties of cast rock-faced-concrete blocks have been urged and the monstrosities themselves have made pitiable what otherwise might have been semi-respectable structures—"semi," mind you, not "wholly," respectable; for the taste which could advocate and incorporate into its product such base imitations could not create or fashion a thoroughly respectable structure. Some two years ago while acting as chairman of a board to adjust, and settle perchance, jurisdictional differences between the carpenters, the architectural iron workers and the sheet metal workers of Chicago, I suggested facetiously that the fabricators of imitations should be penalized by giving over to the trades whose products were imitated the erection of all such imitations. Thus stone masons should erect all tin fabrications simulating stone cornices, architraves or entablatures, and do plastering where plaster simulated Caen-stone—one might put it "con"-stone—on walls and in vaulted ceilings. My pleasantry was met with hearty and strenuous disapprobation—each trade wanted to tell its own little lie and to reap the benefits which each felt certain would accrue to it in a world so slightly endowed with the elements of sincerity or of good taste.

So my first item of advice, if I may be permitted to offer advice to a body of men interested in the development or handling of a comparatively new and altogether worthy building material, is to treat the product with respect, to shun and scorn imitations, to recognize limitations, which attach to all materials, as well as to all men, and to work within those limitations. This is not saying that because a thing has been done, and frequently and appropriately done, in one material it shall not be done in another or a new material which may be employed with equal propriety; however, the new material should not employ forms which are purely distinctive of the old, but should develop forms which inherently characterize the new.

What these characteristic forms may be is a subject for very searching study and analysis. Possibly through synthesis rather than analysis will the characteristic forms disclose themselves. So was it in the past with the old materials—so probably will it be with the new.

NOW concrete is a material which lends itself to many kinds of manipulation. It can be cast, poured, pressed, assembled in the shop or on the job; it can be applied in liquid or in solid form to the work immediately in hand. So many are the possible methods of its application—such a diversity of means may be employed toward its legitimate ends that some of its enthusiastic sponsors see in it a panacea for structural ills and possibly for aesthetic building ills, a substitute for all previously employed building materials—excepting, possibly, door hinges—and a perfect end in itself. Therefore, it behooves those who can impartially survey the entire field to offer both warning and encouragement—encouragement in its legitimate use; warning against its too free employment, especially where other materials may better serve the conditions. The economics of the general situation favor concrete, and through this factor alone there may arise a tendency toward its too general employment; toward its substitution for other materials which, though perhaps costing more in mere money, satisfy the senses and better fulfill geographic and climatic conditions. The cheapness and ease of casting a flat slab of concrete has led certain enthusiasts to advocate the general adoption of a flat slab type of roof in any and all parts of the country (and ultimately of the world). It is advocated

for a northern climate because it can very cheaply be made strong enough to hold a load of snow and ice. But that is not what a roof is for—it is to shed snow and ice. The flat slab roof is advocated for a southern climate because the overhang for shade is so cheaply procured. The shade is desired, but not at the expense of ugliness which results from unembellished overhangs—and concrete embellishments are expensive. The factors of ease and economy in manufacturing concrete slabs, whether to be applied vertically or horizontally, contribute to a "simplicity" which tends toward stupidity and to a barrenness which begets ugliness. Where the general form is stupid and ugly not much in the way of reclamation can be effected by proportioning of windows or application of superficial ornament. If the mass is interesting and appropriately conditioned, geographically and climatically, slight defects in details will not too seriously challenge the taste, but an ugly mass is fatal.

In spite of the fact that the learned ones will point out that concrete was a favorite building material with the ancient Romans, and that traces of it are found attaching to Greece, Egypt and the ancient Orient, concrete as employed by modern Americans is a new material, the science and art relating to which are not fully developed. Much has been done to satisfy the conditions of its employment—much more remains to be done. The newness of an art, or the suspected newness of an art, is a sufficient cause for criticism or antagonism in the average American eye. We are the most conservative people as regards art and the arts on the face of the earth. We will not accept materials and methods on their merits and attempt to develop their intrinsic qualities or worth. Art is about the only line along which we are conservative, however; that is, we conserve very little along material lines—and we do sling dead art about recklessly and embalm its form in lasting and eternally reinforced concrete in which they appear more dead than heretofore conceivable. The fact that they are embalmed in a vital and vigorous material emphasizes the fact of death. There are those who claim that these dead forms are alive—but only to the dead do the dead live! Concrete is a vital material full of character—let us give it its vital forms.

BECAUSE concrete has for so long a time been poured into moulds or forms, and because of the coarseness of its ingredients, one of which was stone which could go through a two-inch ring, the earlier designers, and I fear there were architects among them, coupled in their minds concrete with crudity and coarseness of detail and, being dependent upon precedent, and knowing not where else to look, fell upon the crude Spanish detail and broad masses of the early Spanish Missions as representative of what best might be embalmed in concrete, and so Spanish missions distorted into bungalows and cottages and palaces spread like a rash over the face of the country. As technical and mechanical difficulties were overcome and processes refined, the rash itched to take another form of disease and turned into a classic fever, with now and then a touch of Gothic "pains" noted particularly in the traceries on solids and in voids. The fever still burns, the pains still grip. Expensive forms are built up and destroyed to produce effects which already, ad infinitum, ad nauseam, have been better achieved in stone. However, this is not always to be.

The waste entailed in the destruction of specially constructed and expensive forms has become apparent to many concrete users and exploiters, and their efforts to prevent the consequent loss, especially in case of the smaller residences and the houses with which this conference is more particularly concerning itself, has introduced an element which may well call for restraint in its application. For the sake of economy, forms are used and reused in close proximity. When such forms are not perfect in themselves and in utmost good taste, monotony in repetition becomes deadly, and woe is it to him whom cruel fate has condemned to inhabit a unit in an environment so constituted. Life and joy and self-respect must be absent from the dweller amid such surroundings. Even where the forms are charming and singly in good taste, repetition robs them of individuality and unfits them for occupancy by anyone possessed of character and personality. Individuality of character and personality are absolutely necessary in the units which go to make up the mass of a civilized and self-respecting society. Consequently another injunction, which I offer by way of advice, is to avoid wastage of forms—but even more to avoid the monotony which must follow the unrestrained employment of any "motif," ugly or charming. Introduce spice into life in the way of variety. The principle underlying this admonition is just as applicable to a mill town as it is to the most highly developed suburb. In point of fact, little or no distinction should be drawn between the mill town and the "swell" suburb. It should exist possibly only in the size of units; it should not exist in the expression of good taste and mental and bodily comfort. Perhaps I am getting ahead of the age and of the present topic. I hope not.

In spite of the manifold and varied means, methods, processes, applications, manipulations, textures, surfaces and colors appertaining to the use and employment of concrete as a medium of archi-

tectural expression and embodiment, I am not certain that I should advise its sole and unlimited agency in housing the activities of any one neighborhood or community. Indeed, I am quite certain that I should not so advise; and this not altogether on the ground of a needed variety, but that there are other materials which transcend even concrete as a medium of certain desired expressions of the human spirit in the art of architecture. And I should desire to see no community curtailed of, or denied, the right and power to express the best that is in it in the materials best adapted to that expression. Thus marble, granite, iron, bronze, brick, slate, each one possesses inherent qualities or characteristics not translatable into concrete even through the agency of base and artificial imitation. In the matter of brick, for example, there is scale to the unit which relates the mass to human desire and experience in an intimacy possible with no other material, while in natural color and texture the range is boundless. But even with all that, brick needs other materials in its neighborhood for contrast and variety, purple-green of slate, soft white of stucco, weathered gray of timbers, with carvings and turnings, and craftsmanship which cannot be imparted by a mould, however exquisitely the surface be wrought by the modeler's hand.

I ASSUME that as an architect I am expected to say that the only way to make concrete an accredited and acceptable building material adapted to all human material and aesthetic needs is to have its essence filtered through the alembic of the architectural profession or its representatives.

If you wish me to say it, of course I will—with reservations. Now the most stupid of anachronisms are perpetrated by so-called architects (they really are untutored archaeologists or, rather, grave-robbers), and the most blatant of modernisms, cut off from all context of history, have emanated from, again, so-called architects (they really are unlettered sentimentalists). But I will say that the possibilities of concrete as a medium of aesthetic expression in building may best be apprehended by a sincere architect, with knowledge of modern social conditions and tendencies, working in cooperation with those who know the material at first hand and who also are sincerely working to exploit nothing but to develop the latent and inherent possibilities of a worthy material. Such architects exist, such material men exist. They should come together. It should be a function of such conferences as this to bring them together.

I must say one word here as to what should characterize the architect in whom the material man and the public may well place their confidence, being assured that his will be leadership—real leadership and not selfish and autocratic domination. That architect must not exploit any material or system, but must be able to recognize and free to employ the most effective and appropriate under the individual conditions. He must sense the sociological, including the social, ethical and aesthetic tendencies of his time so as to aid his client in the sympathetic expression of them, curbing wasteful, demoralizing, disintegrating tendencies, and aiding toward social unification; diagnosing present conditions and meeting the situation with skill and clarity of vision rather than in applying formulae learned by routine in the schools. The architect should think in advance of the public and see the goal and the way thereto more clearly. Pity the public which follows, and condemn the architect who pursues the selfish and blind course.

Now, in so far as this paper constitutes a report to be discussed or otherwise sent to oblivion or laid aside for future reference, which amount to about the same thing, its elements may be summarized and augmented as follows:

IMITATIONS

Concrete has a character of its own; there is no call to torture it into imitations of stone, wood, bronze or other material. Details cast in moulds should bear the plastic touch of the modeler and not the chisel marks of the sculptor.

ECONOMY

Forms suited to the special purpose should be used—and forms extravagant of labor and material should be avoided and should be employed only where duplication can be accomplished without monotony.

MONOTONY

Even a good thing ceases to be a good thing when used in excess, and two concrete houses from the same forms, placed side by side, is an excess—such treatment is permissible only in barracks where men are in uniform and drilled into the same line of thought, act and movement, all individuality being eliminated.

SLABS

Flat slab roofs may at times and in places be appropriate. A general use would be deadly unless counteracted by features the initial expense of which would more than offset the element of economy, which alone would seem to call for a wide prevalence of such roofs.

MONOLITHIC FORMS

This method presents advantages in certain types of structure. The appearance of mass and strength is enhanced by monolithic treatment. Openings and corners can be characteristically and ornamentally treated at slight or no additional expense.

Houses pre-cast from monolithic forms and transported as slabs or as units are to be looked upon with suspicion as tending to create types and general monotony.

BLOCKS

(a) *Units.* Concrete blocks laid to be effective as units may perform a legitimate aesthetic as well as structural service. Texture and color can be given them. Their danger lies in exaggerated scale and general uniformity. Stone has the advantage of lending itself to cutting and fitting in length and height without consequent economic waste. The manufacture of concrete blocks should be studied with variety of size as well as appropriate scale in mind. Corners and angles should be true, and crude and rock-faced surfaces avoided.

(b) *Backing for Stucco.* This is a legitimate field for the use of concrete blocks. Scale need not be taken into account; neither need such matters as sharpness of corners and angles or crudity of surface. Uneven chipping where blocks are cut approximately to the desired outline presents no obstacle to the perfect finish. Surfaces should be such as to which the stucco will most readily adhere.

COSTS AND PERMANENCE

In a letter from an official of the United States Housing Corporation I find these words: "We were satisfied that there were certain types which would produce a good practical house at a very moderate cost, but it appeared to us that this could be done only where the same unit was repeated indefinitely, and our belief was that this would produce a deadly monotony." As to the monotony we have already heard; as to the cost and permanence or durability, let me say that there may be cases where permanent houses would be a drawback in a developing community. There would be very little salvage in a wrecked concrete house, while the wrecking would entail almost as much expense as the constructing. Unless a community is well "zoned," buildings of a too permanent nature are an economic waste, even though the initial cost may be the same as for a building of less permanent character. Where, as in many of our communities, change is the order of the day, well constructed buildings of a more temporary nature are desirable. Buildings of a temporary nature can be "fire stopped" and made safe for occupancy.

FIREPROOF CHARACTER OF CONCRETE HOUSES

In the letter above referred to, these words appear: "We found that the people who were interested in the concrete house were, almost without exception, trying to build every part of the house in concrete, including porches and all the trim." This would seem to me to indicate a deficient sense of humor on the part of the people referred to, as well as defective vision. I will grant that the designs of many architects who never intended to make a joke of their work are such as to be readily translated into concrete and would not lose in the process; but a concrete man with a sense of fitness, I'll call it humor, would not deign to effect the translation. I must still warn the enthusiast against excess; excess of imagination as well as excess in material means, or some of them may wish to make the door hinges out of concrete after all! Fireproofness, so to speak, and permanence are good qualities, for which it is possible at times to pay too much.

METHODS AND MEANS

How to make the house reasonably fireproof, reasonably durable, reasonably attractive and reasonably economical in cost and in upkeep presents a series of problems for the architect and the concrete expert. As an architect, I shall receive the findings of the concrete expert and will make such application of the methods and means presented as may suit the particular case. I will even present the case beforehand to the expert—if it is not already covered—and aid him in his solution. I will even ask him now to present types of floors in structure and finish which are durable, economical and appropriate to a small house. I will ask the same concerning the roofs, high-pitched, low-pitched and flat.

There are many problems to be solved in connection with the design, construction and location of the concrete house, and I congratulate the concrete and cement interests that they have enlisted the services of so many serious-minded and enthusiastic men in the quest for the best along these lines. I hope that architects of vision and deep feeling may be called upon to co-operate.

In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

The Architect and the Government

JUST how to impress the people and those in high position in the Government with the value of the architect's services is further discussed by Glenn Brown in the second of a series printed in this issue on the relations of the architect.

"With few exceptions," writes Mr. Brown, "public officials are striving to secure the best results for their masters, the people, and bow gracefully when the public emphatically expresses an opinion."

The present attitude of the Government toward the profession of architecture is compared by Mr. Brown with that of eight to twelve years ago and an analysis is made of the present attitude of the Institute which he believes fails to impress on those in high authority the real status of the architect in his relationship to the Government or to emphasize his right to leadership in all building operations.

Every member of the profession will undoubtedly follow this discussion through its various phases as presented in future issues with increasing interest. The editors invite from architects the fullest expression of opinion on these important matters.

The Reply of the Housing Corporation to Senatorial Criticism

THE reply of the United States Housing Corporation to the criticisms of the Senate Committee on Public Buildings has been published. It refutes inaccuracies of statement contained in the Senate report and successfully answers the charges that have emanated through a superficial knowledge of facts.

It is necessary to bear in mind that all of the housing operations carried forward during the war were not conducted by the Housing Corporation. As a matter of fact, there were in all six agencies or departments. All of the houses built by these departments for industrial workers were of a permanent construction and of modern type. The question that the Housing Corporation asks, in its reply is—was this construction of modern and permanent type wrong? Should the Housing Corporation simply have erected short-lived, temporary shacks to serve only the war's emergencies? It is stated that the loss to the Government in dollars and cents will be about the same in both types.

A material salvage loss was created in the selling of a large number of houses and at a material increase over previous housing costs. The temporary housing, while having less salvage value, is compensated for in part by the lower cost of construction. All things being equal, that is to say, if the salvage in both types were the same, the Government has secured at a minimum cost the very decided advantage of having created a decent type of American industrial housing.

The injustice of the criticism on the part of the Senate Committee lies principally in the omission to take this very important factor into consideration. The amount of work that was successfully accomplished by these six departments and the groups of competent men who administered them is of a greater value than is generally known. The Senate Committee might well have considered these things before they hastily created a feeling of distrust toward men who unselfishly gave the best they had toward working out this splendid result.

Unfortunately, just what large measure of good result was secured, just how great the advance has been in the development of industrial housing, is known only to the comparatively few who came in contact with these things during the war. We need an appropriation by the Government that will permit the widest circulation of a report embodying these things. The publication of a meager edition some three months ago barely furnished a copy each to the many employes of these departments.

THE AMERICAN ARCHITECT has received scores of letters from architects complaining that application for copies of these reports received the reply that a very limited edition was almost immediately exhausted. If these reports could be at once reprinted and made available to that large number of people who would use them, curtailing if necessary as a matter of economy many senatorial speeches circulated by millions—an accurate knowledge of facts would be obtained and the censure of the Senate Committee proved to have been based on misinformation.

The report of the Housing Corporation closes with the significant statement: "The last houses in demand by the tenants or the prospective house owners have been the cheap, temporary houses recommended by the Senate Committee's report."

The Tendency Toward Hotel Life

THE rapidly increasing number of apartment hotels in all of the larger cities indicates a very radical change in methods of living. Buildings of this type, which are subdivided into small groups of two or three rooms and bath, with a general dining room on the ground floor or, in some instances, on the roof, are being projected in large numbers. As an investment this type of building presents attractions. The rents which are asked and readily paid would ordinarily secure twice the floor area in the usual domestic types.

In this connection it is interesting to learn that a large apartment hotel on Park Avenue, in New York, that will not be ready for occupancy until next October, has already enough applications to more than fill its apartments.

The hotel dwelling habit is largely on the increase all over the United States and it is astonishing, says the proprietor of one of the larger hotels, to note the present tendency to secure permanent living quarters in these buildings. Investigations show that the better class of hotels have to-day rented to permanent dwellers all the space that they are willing to allow. These conditions aggravate the shortage of transient hotel accommodations and are the principal reason for the many new hotels now being erected.

It would seem that the allurements of a home do not attract that class of people who are able to pay the high prices asked for permanent hotel accommodations and that the dweller in cities is drifting toward either the usual type of hotel or else the apartment hotel, which is slightly less expensive, because of its less complete service.

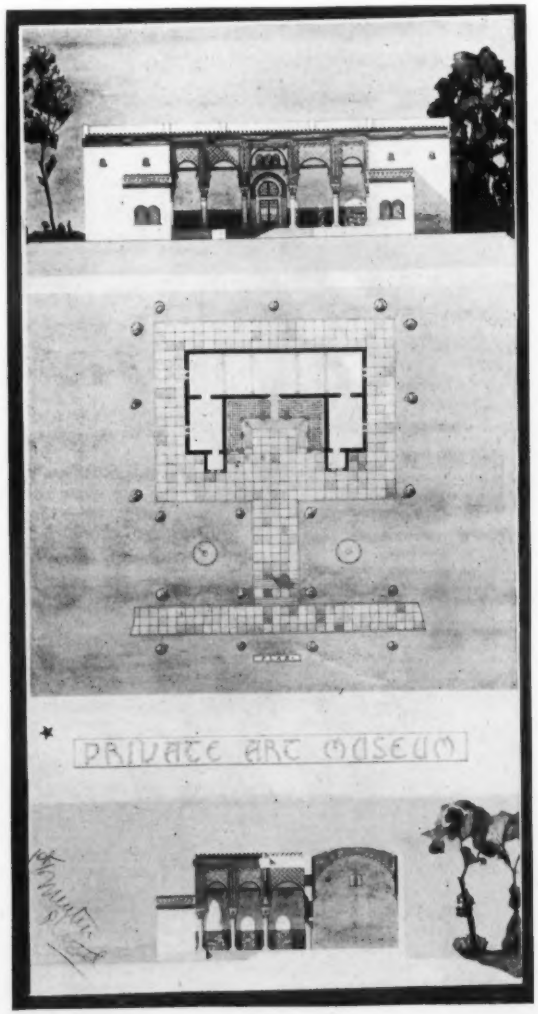
Civic Untidiness

A BESETTING sin of all large cities is that of untidiness. This fault has two aspects, that of the individual who carelessly strews litter and that of the authorities who allow disordered conditions to exist and often become acute.

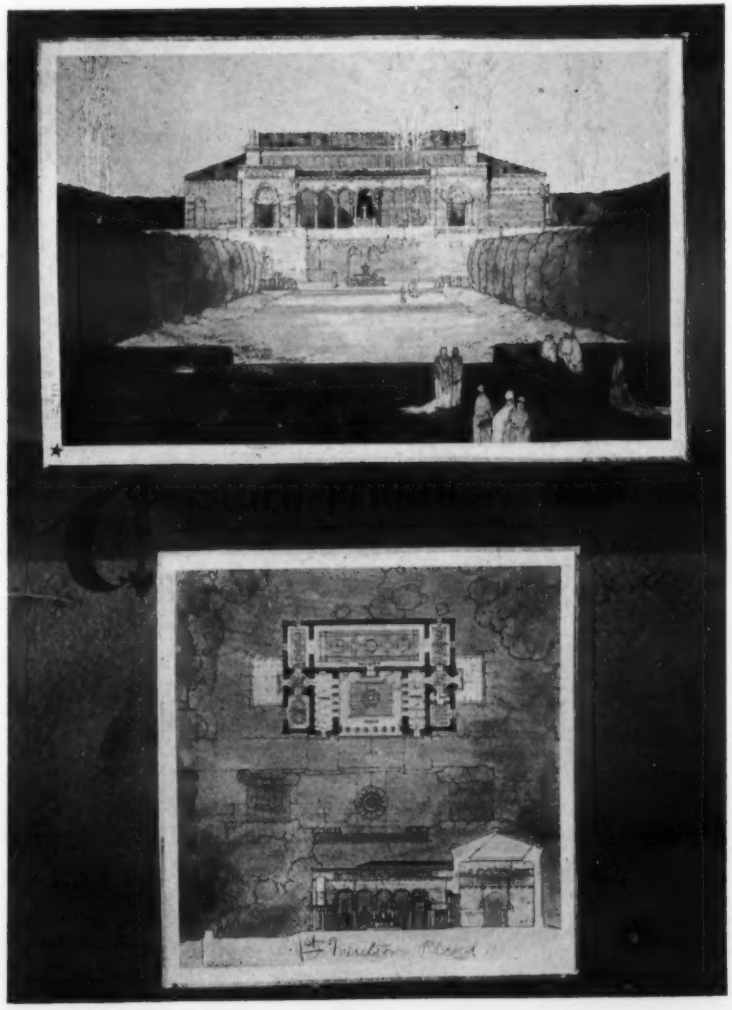
The Merchants' Association of New York has submitted a report summarizing its activities during the months from January, 1919, to January 1st, 1920. This summary shows a comprehensive range of activities and discloses conditions of slackness in the city government that should be no longer permitted to exist. The complaints received by this bureau have been tabulated under a classified heading. It will hurt the civic pride of the true citizen to learn that in spite of a heavy tax rate which should insure the most perfect public service, the majority of these lapses from essential tidiness comprise the removal of garbage, of dead animals, accumulated rubbish, and in many instances violations of public decency. As naturally will be inferred, the most flagrant violations occurred in the thickly settled districts so largely populated by foreigners. It seems difficult to secure co-operation from these people in the observance of simple regulations or in the use of receptacles provided to insure tidiness. Further, it is made subject of extended comment that the stores of these districts are so slovenly kept as to become not only eye-sores, but to create unsanitary conditions and a menace to health.

These matters suggest the ever-present problems of Americanization. It is in that direction that prevention of a city's untidiness lies. Good citizenship promotes civic pride. The quicker we set to work on this phase of Americanization the sooner we will attain those ideals that are reasonably looked for as fundamentally essential.

THE AMERICAN ARCHITECT



W. E. VIRRICK COLUMBIA UNIVERSITY
FIRST MENTION PLACED



G. W. TROFAST-GILLETTE COLUMBIA UNIVERSITY
FIRST MENTION PLACED

CLASS "B" I. PROJET, A PRIVATE ART MUSEUM
STUDENT WORK, BEAUX ARTS INSTITUTE OF DESIGN

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

ARCHITECTURE, WILLIAM F. LAMB — SCULPTURE, JOHN GREGORY

MURAL PAINTING, ERNEST C. PEIXOTTO — INTERIOR DECORATION, ERNEST F. TYLER

INDUSTRIAL ART DESIGN, ARTHUR CRISP

Official Notification of Awards—Judgment of December 16th, 1919

PROGRAM

CLASS "B"—I ANALYTIQUE

The Committee on Architecture proposes as subject of this Competition:

"THE ENTRANCE OF A CITY CLUB"

A club in a large city is planning a new entrance motive for its Club House. As the club house is situated on one of the main avenues of the city it is the purpose of the committee in charge not only to embellish the entrance but to provide a balcony from which passing parades may be reviewed. The main floor of the club house is three feet above the sidewalk. The face of the building is set ten feet back of the building line, but the entrance motive shall be brought out to this line and shall be crowned with a balcony entered from a French window at the second story. The second story level is twenty-two feet above the main floor.

JURY OF AWARD: R. M. Hood, H. R. Sedgwick, E. Gugler, H. M. Woolsey, Mr. Ludlow, J. T. Haneman and C. F. Gould.

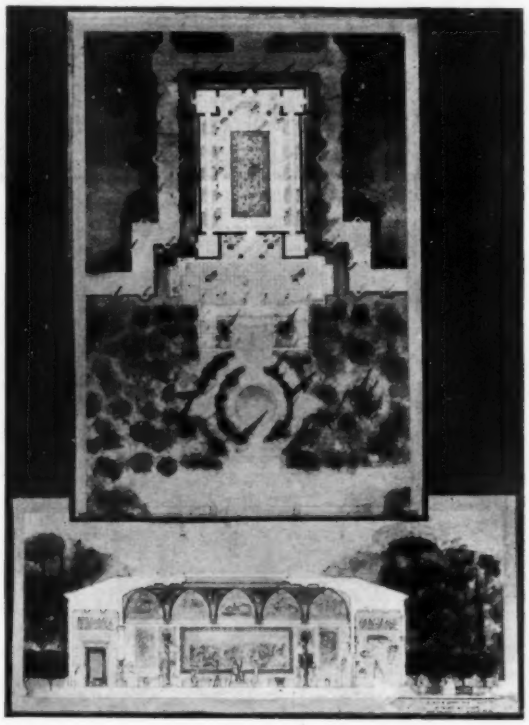
Number of drawings submitted—110.

AWARDS:

FIRST MENTION PLACED:—S. Grillo, Atelier Corbett-Gugler, New York; C. Contreras and O. Betts, Columbia University, New York; F. J. Brince, Atelier Hirons, New York.

FIRST MENTION:—C. F. Wright, Boston, Architectural Club, Boston; M. Marsh, Columbia University, New York; W. S. Boice, Atelier Hirons, New York; R. Weber, Thumb Tack Club, Detroit; L. Hamilton, Yale University, School of Fine Arts, New Haven.

MENTION:—C. B. Bengtson, M. E. Witmer and R. W. Arnold, Boston Architectural Club, Boston; J. C. McClymont, Atelier Brazer, Chester; J. P. Bennett and S. Juster, Atelier Corbett-Gugler, New York; C. H. Dornbusch, A. Gilman, F. W. Brown, H. W. Gill, J. M. Shaw, F. F. Williams, A. K. F. Volmer, M. Grisez, H. J. Hoefener and K. Sasagawa, Columbia University, New York; G. E. Tucker, C. A. Lake, L. E. Considine, C. J. Pellegrini, C. B. Marks, E. H. Hughes, J. O. Cahill, G. D. Schoonover, F. O. Rennison, F. P. Kefalos, A. W. Chesterman, F. H. Floyd and I. W. Truxell, Carnegie Institute of Technology, Pittsburgh; E. J. Rutledge and P. F. Dowling, Catholic University, Washington, D. C.; G. S. Beach and J. Schierhorn, Chicago Architectural Club, Chicago; A. Wuchterl, Atelier DeGelleke, Milwaukee; W. P. Sutherland, Jr., Atelier Gougner, Newark; C. A. Smith, Jr., George Washington University, Washington, D. C.; W. A. Schabel and E. C. Rising, John Huntington Polytechnic Institute, Cleveland; D. W. Earel, Patron—R. M. Hood, New York; O. Colby, A. Gambell and R. G. Clifford, Portland Architectural Club, Portland; H. R. Gamble, R. A. Schwarter, W. L. Gibb, Jr., C. E. Maule and J. W. Minick, Pennsylvania State College, State College; E. B. Stanley and H. A. Martin, Syracuse University, Syracuse; W. R. Fisher, W. Kumme, E. S. Young and E. A. Beihl, "T" Square Club, Philadelphia; L. C. Neilson, Atelier Treganza, Salt Lake City; K. B. Niven, University of Texas, Austin; M. W. Gill, Rosalie Haas, A. A. Shay, D. A. Seibert, E. A. Gorospe, D. P. Thomas and E. Wendland, Unversity of Washington, Washington, D. C.; H. F. Neville, R. R. Hibbs and A. E. Evans, University of Kansas, Lawrence; M. D. Williams and C. H. Hinman, University of Minnesota, Minneapolis; L. Lentelli,



J. LUCCHESI — ATELIER HIRONS

FIRST MENTION PLACED

CLASS "B" I. PROJET, A PRIVATE ART MUSEUM

Atelier Wynkoop, New York; W. Douglas, C. B. Lewis, B. S. Georges, D. Weinstein and H. S. Kelly, Yale University, School of the Fine Arts, New Haven.

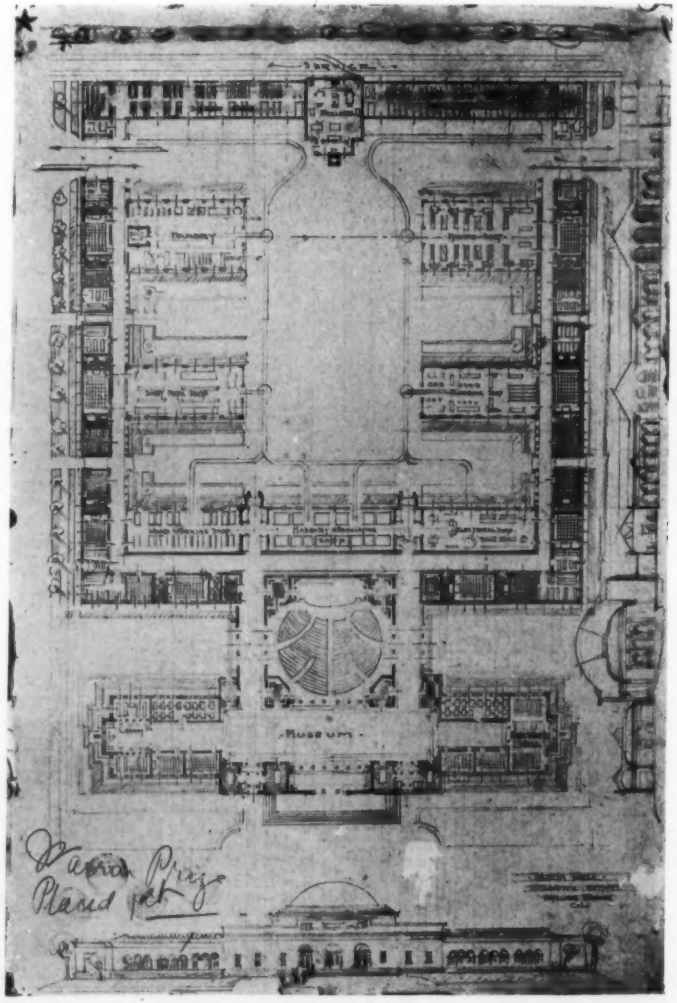
PROGRAM

CLASS "B"—I PROJET

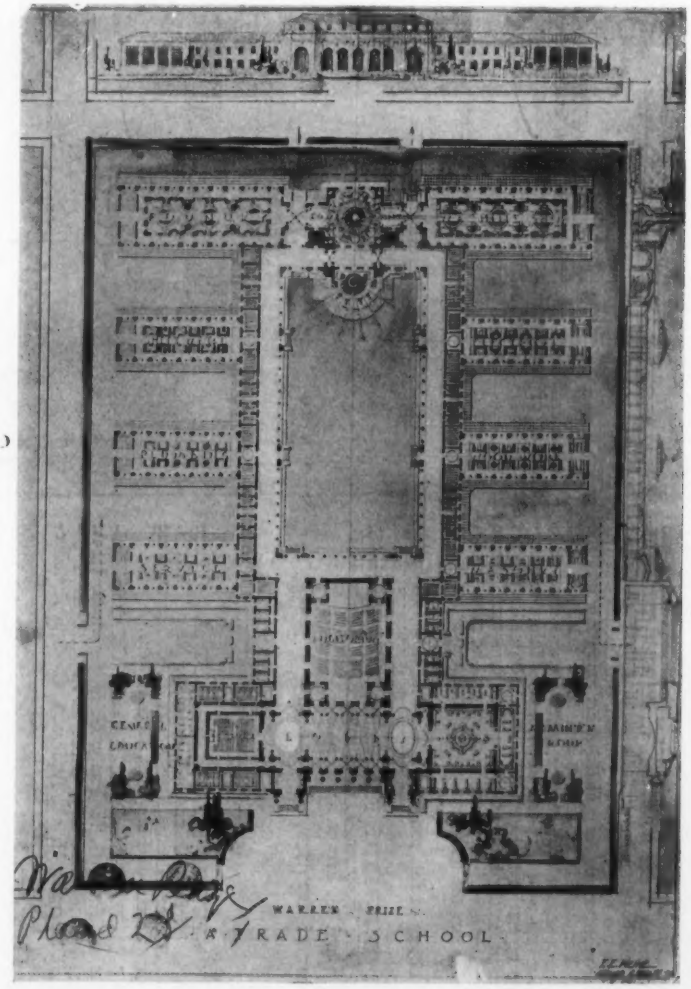
The Committee on Architecture proposes as subject of this Competition:

"A PRIVATE ART MUSEUM."

An Art Lover who has made a collection of paintings, statues and "objets d'art" is planning a small one-story



G. D. WHITE PLACED FIRST ATELIER DENVER



E. E. WEIHE PLACED SECOND ATELIER A. BROWN, JR.

A TRADE SCHOOL
WARREN PRIZE COMPETITION
STUDENT WORK, BEAUX ARTS INSTITUTE OF DESIGN

museum to house his treasures on his suburban estate and has chosen as a site a location at the high end of his garden. He has decided that the building shall cover not more than 100 by 150 feet of ground, but he has not determined whether the long or the short axis shall face the garden. For his larger marble and some bronze statues he wishes a loggia or a terrace court. There must be a gallery or hall with top light where he can hang his paintings and tapestries and provision should be made for his ivories and small bronzes. He wishes one small room for his collection of coins and jewelry and he must have a small room for the curator who will watch over his treasures.

The subject of this program is the design of this building.

JURY OF AWARD: F. A. Godley, B. W. Morris, C. Collens, J. F. Harbeson, F. C. Hirons, E. V. Meeks, F. B. Chapman and M. Prevot.

Number of drawings submitted—131.

AWARDS:

FIRST MENTION PLACED:—G. W. Trofast-Gillette and W. E. Virrick, Columbia University, New York; J. Lucchesi, Atelier Hirons, New York; A. C. Smith, Yale University, School of Fine Arts, New Haven.

FIRST MENTION:—D. R. Everson, Columbia University, New York; G. N. Pauly, G. H. Goodwin, R. A. Fisher and T. R. Hinckley, Carnegie Institute of Technology, Pittsburgh; H. W. Anderson, Chicago Architectural Club, Chicago; D. W. Murphy, Yale University, School of Fine Arts, New Haven.

MENTION:—A. H. Gardner, Boston Architectural Club, Boston; Y. Kasin, H. A. Bergman, G. P. Hritz, G. Hacker, W. C. Yanike, S. Oxhandler, F M. Libby, H. J. R. Barrett, J. Hill, A. T. Terrell, R. E. Hacker, R. H. Bickel, R. W. Craton, Jr., M. R. Dassett, L. T. Obel, H. R. Kaplan, A. E. Egerssy and G. J. Pfost, Columbia University, New York; W. A. Voyce, C. Lek. DePrefontaine, A. K. Sabine, P. R. Working, R. Schmertz, H. T. Aspinwall, R. D. Devaney, W. N. Holmquist, B. A. Pipinos, S. P. Stewart, J. G. Todd, M. E. Green, H. W. Stone, M. C. Drebin, W R. Frampton, L. H. Rank, F. Highberger, N. P. Rice, E. A. Early, B. H. Dierks, R. E. Dake, A. A. Lewis, K. Snow, A. Herrman, H. A. Wieland, L. J. Rockwell, D. H. Oertel, L. Lashmit, H. C. Brockman, C. W. Hunt, M. W. Pohlmeyer and R. M. Crosby, Carnegie Institute of Technology, Pittsburgh; L. Wamnes, Chicago Architectural Club, Chicago; L. F. Laporte and R. F. Rabold, Catholic University, Washington, D. C.; G. W. Green, Atelier Corbett-Gugler, New York; H. Bradley and A. P. Starr, George Washington University, Washington, D. C.; P. H. Giddens, G. W. Ramey, Jr., E. R. Merry, W. R. Reece and H. J. Price, Georgia School of Technology, Atlanta; M. Jaeger, Jr., Atelier Hirons, New York; P. Goodman, Atelier Licht, New York; L. F. Fuller and B. A. Freeman, Los Angeles Architectural Club, Los Angeles; H. Sweeny, Jr., Pennsylvania State College, State College; J. M. Rowley, E. R. DeShaw, G. H. Spohn and W. R. Shirley, Syracuse University, Syracuse; P. L. Goldberg, E. C. K. Schmidt, T. R. Fahey and H. R. Leicht, "T" Square Club, Philadelphia; A. H. Corbett, J. L. Skoog, E. W. Grandstrand and Elizabeth R. Ayer, University of Washington, Seattle; W. M. Icenhower, D. K. Frohwerk, F. L. Fleming, J. W. Dawson, G. L. Chandler, J. L. Benson and S. Bihr, University of Kansas, Lawrence; T. F. Price, Atelier Wynkoop, New York; R. B. Thomas, Yale University, School of Fine Arts, New Haven.

H. C.:—W. J. Perkins, Carnegie Institute of Technology, Pittsburgh; M. Sillani, Chicago Architectural Club, Chicago; L. F. Saxman and E. Bircsak, University of Kansas, Lawrence; A. H. Goddard, Atelier Wynkoop, New York.

THE WARREN PRIZE

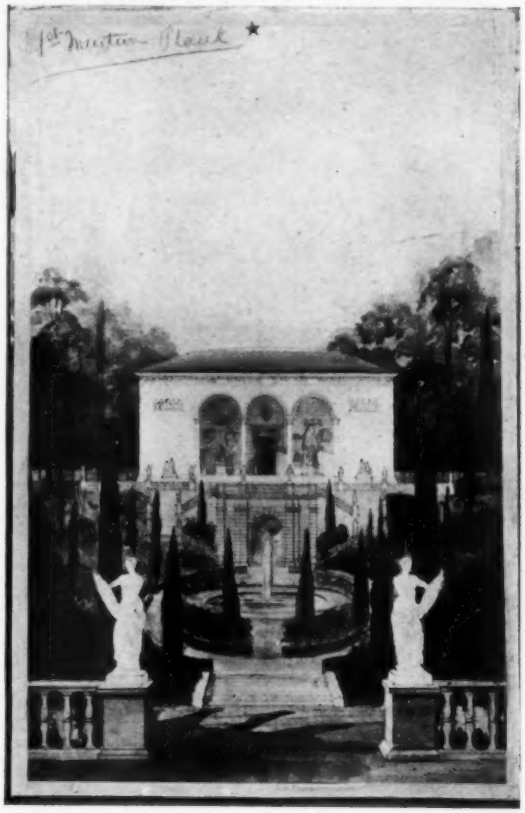
The gift of Messrs. Whitney Warren and Lloyd Warren, offered for excellence in planning a group of buildings.

FIRST PRIZE—$50.00. SECOND PRIZE—$25.00.

(For conditions governing this Prize Competition, see Circular of Information, Article VIII—Par. 2 and 3.)

PROGRAM

The Committee on Architecture proposes as subject of this Competition:



J. LUCCHESI ATELIER HIRONS

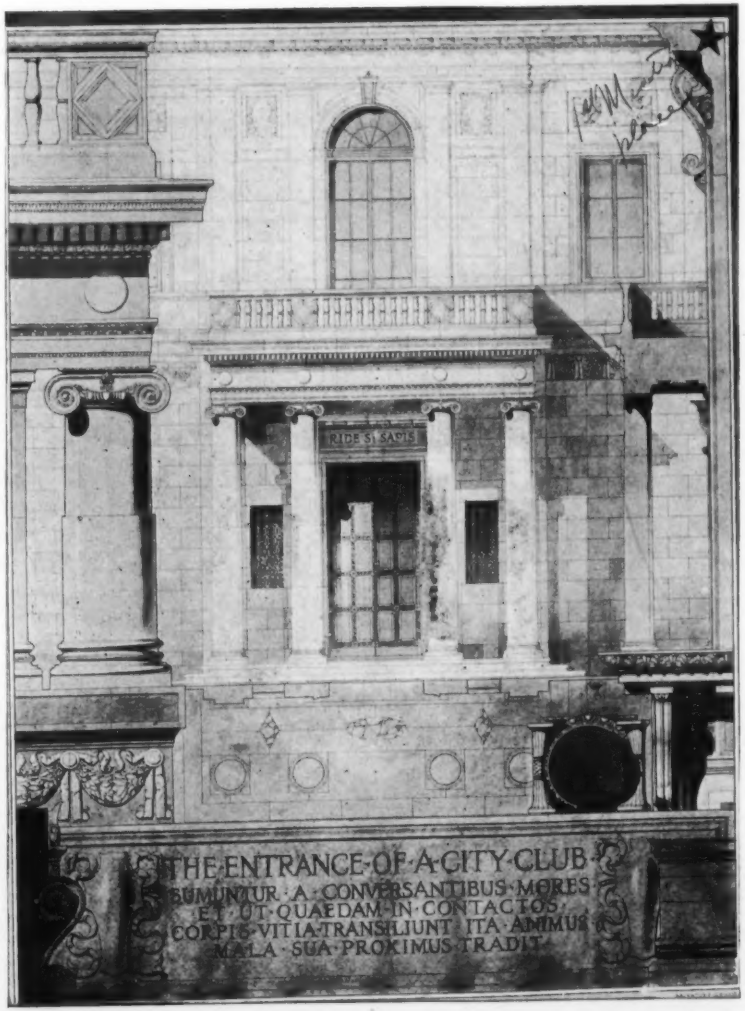
FIRST MENTION PLACED

CLASS "B" I. PROJET, A PRIVATE ART MUSEUM

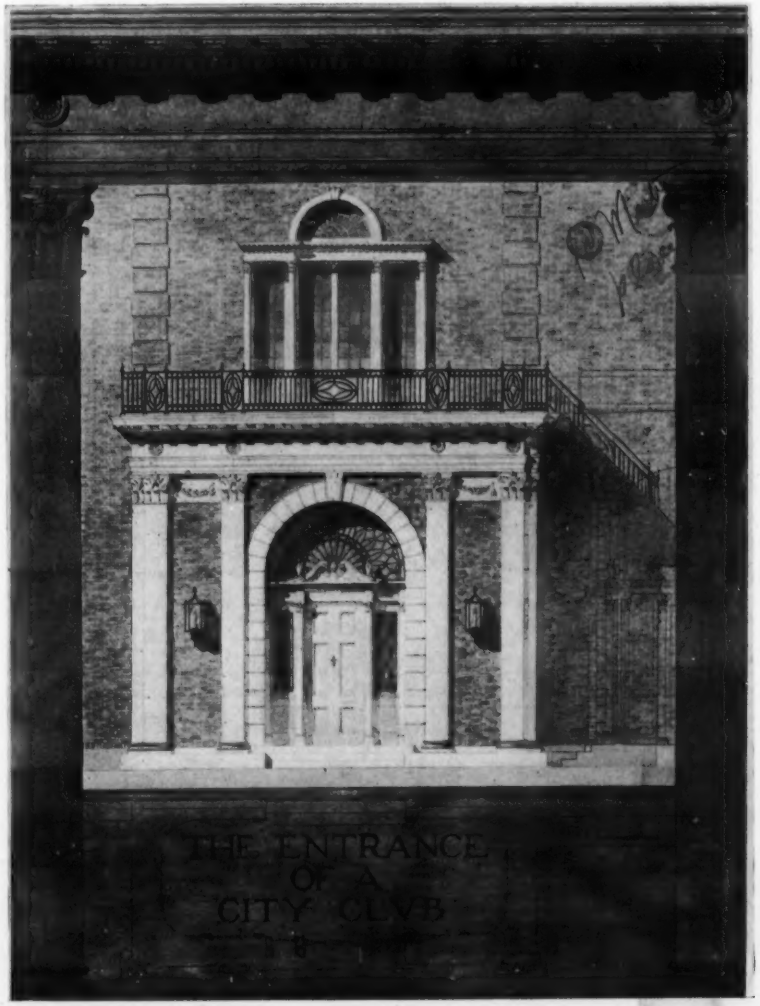
"A TRADE SCHOOL."

The purpose of this school is to furnish instruction in the building trades. It is located on the outskirts of a large city, on a lot 500 by 800 feet, approximately level, and bounded by streets of equal importance. The site is on a street car line and near a railroad. The buildings to be erected shall be of utilitarian type, but scholastic dignity should not be lacking, for the school not only teaches the trades but requires a few courses in general education.

In planning the buildings, care should be taken that the students and instructors should have easy access to the class rooms and shops, and ample provision should be made for the delivery at the shop of materials that will be used for instruction and for the removal of worked materials


RIDE SI SAPIS
THE ENTRANCE OF A CITY CLUB
SUMUNTUR A CONVERSANTIBUS MORES
ET UT QUAEDAM IN CONTACTOS
CORPIS VITIA TRANSILIUNT ITA ANIMUS
MALA SUA PROXIMUS TRADIT

S. GRILLO FIRST MENTION PLACED ATELIER CORBETT-GUGLER



O. BETTS FIRST MENTION PLACED COLUMBIA UNIVERSITY

CLASS "B" I. ANALYTIQUE THE ENTRANCE OF A CITY CLUB
STUDENT WORK, BEAUX ARTS INSTITUTE OF DESIGN

and rubbish. It should also be borne in mind that while concentration is desirable, light and air are of prime importance. While for the purpose of defining the elements of the problem, they have been grouped under four headings, it is not the intention of the program to limit the students to four buildings or groups of buildings, and perfect liberty should be exercised in combining or dividing the elements with due consideration of the required circulation for men and for materials. The bulk of the requirements will naturally be found on one main level, but certain ones, particularly in the Administration and General Instructive groups, may be found on other floors. In any case, their location shall be plainly indicated, by additional plans if necessary.

The elements are as follows:

1. The Administration group shall provide a Public Lobby, Offices for the President, Secretary, Dean and Registrar with the necessary clerical force, an Auditorium seating about 800, a Small Library and a Small Trades Museum, with an Exhibition Room for the work of the students.

2. The General Instruction group shall provide a Lecture Hall to seat about 300, three or four Class Rooms and two Drafting Rooms.

3. The Trades group shall provide six shops as follows:

A Foundry
A Machine Shop
A Masonry and Brick Laying Shop
A Woodworking Shop
A Sheet Metal Shop
A Plumbing Shop
An Electrical Shop

Each of these shops shall have a small class room, an office for the professor in charge and one for his assistant, a storage room and a locker room with toilet accommodations; these in addition to the main shop working space. In the foundry and machine shops this working space shall be about 8000 sq. ft., in the other shops about 5000 sq. ft. Ample height shall be provided in all shops for the character of work to be done, as well as for light and ventilation.

4. A power plant and small service building shall be provided.

One or more courts should be provided to serve for service and as spaces where small sections of buildings might be erected by the students.

JURY OF AWARD:—F. A. Godley, B. W. Morris, R. M. Hood, C. Collens, B. Delehanty, J. T. Haneman and F. B. Chapman.

Number of drawings submitted—38.

AWARDS:

PLACED FIRST:—G. D. White, Atelier Denver, Denver.

PLACED SECOND:—E. E. Weihe, Atelier A. Brown, Jr., S. F. A. C., San Francisco.

PLACED THIRD:—W. F. McCaughey, University of Illinois, Urbana.

PLACED FOURTH:—J. S. Whitman, Cornell University, Ithaca.

PLACED FIFTH:—G. S. Underwood, Yale University, School of Fine Arts, New Haven.

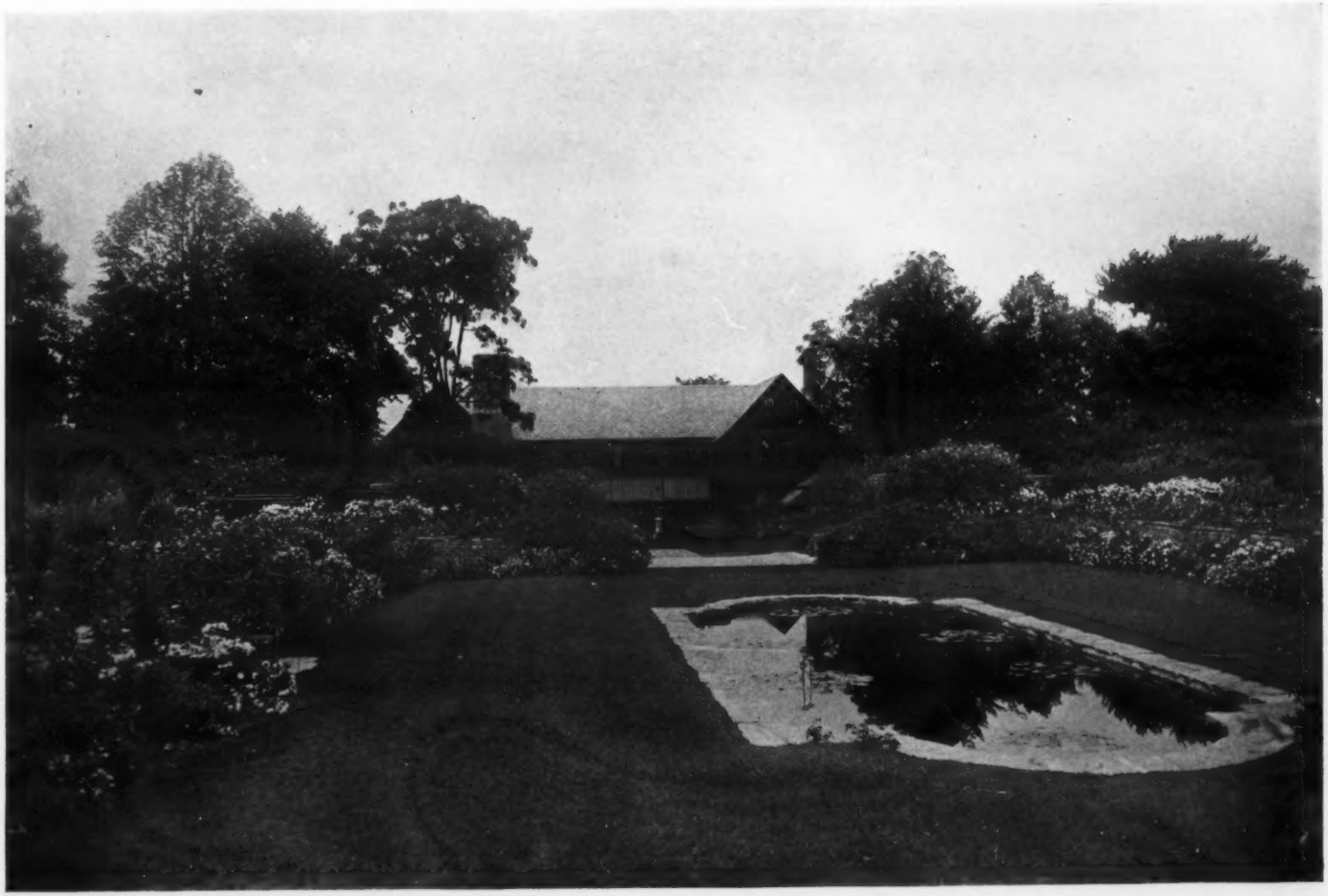
Civic Beauty

At a time when many American cities were yet lacking in the fundamentals of safe, healthy and decent conditions of community life, the "city beautiful" movement began to strike root, and soon after sums were appropriated for aesthetic objects which must have struck the older cities of the western world as altogether prodigal. Now that these essential services are, in most cases, provided for or under way of accomplishment, the movement apparently is suffering a set-back. The *Survey*, discussing this, calls attention to the curious fact, that at the recent fifteenth annual convention in Philadelphia of the American Civic Association—which has always represented the aesthetic branch of the town planning and improvement movement—speaker after speaker apologized for mentioning "beauty" at all as an element of importance in community life.

The reason, of course, is not far to seek. Too often in the past the beautification of our cities has been on the principle which has been described as Queen Anne in front and Mary Ann at the back. The ambitious light standards in Main street were balanced by a complete absence of any standards in rear alleys and smaller byways. At present the tendency seems to be to swing too far in the other direction and to demand a demonstrably utilitarian and "paying" reason for every improvement.

Unfortunately, the new insistence upon the practical brings its own exaggerations and pitfalls. These were evident, for instance, when the architect of America's most beautiful war town deplored the fact that the population was not made up exclusively of one category of workers and their families, or when the provision of good homes for workpeople at prices within their means was held up by speaker after speaker as a certain panacea for social unrest. As at many other gatherings of civic reformers, one also heard repeatedly the popular fallacy that the problems of our overgrown cities can be solved by extending these still further in area and in population.

The Civic Association convention was both practical and inspiring, however, when it discussed the topics traditionally near to the heart of its membership. The war against dirt and noise, against the disfigurement of town and country, against low taste in public and commercial recreation, against anarchy in architecture, still needs its champions and its cohorts. A new era, marked outwardly by unrest and bitter economic strife, but inwardly possessed—for all the sneers of cynics—by high ideals of social reformation, must find expression in appropriate environments. The war memorial movement, directed into desirable channels largely by the energy of this association, is one way. Another is the application to the modern problems of city planning and zoning of the imaginative quality which was often evident in the discussions at this convention.



HOUSE AT OCEANIC, NEW JERSEY
A. J. JACKSON, *ARCHITECT*

HOUSE AT OCEANIC, NEW JERSEY
A. J. JACKSON, *ARCHITECT*

HOUSE AT OCEANIC, NEW JERSEY
A. J. JACKSON, *ARCHITECT*

LIVING ROOM
HOUSE AT OCEANIC, NEW JERSEY
A. J. JACKSON, *ARCHITECT*

VOL. CXVII, NO. 2303 FEBRUARY 11, 1920

DETAIL OF MAIN ENTRANCE

HOUSE OF WHARTON POOR, FLUSHING, L. I.

GOODWIN, BULLARD & WOOLSEY, *ARCHITECTS*

GARDEN OF A HOUSE AT OYSTER BAY, L. I.
DELANO & ALDRICH, *ARCHITECTS*

Current News

Happenings and Comment in the Fields of Architecture and the Allied Arts

In order to supply our readers with material of current interest, the news and comment appearing in issues of THE AMERICAN ARCHITECT delayed by the printers' strike will be as of actual rather than stated date of publication.

Street Trees

Providing shade on city streets is as much a municipal function as providing lights or sidewalks and should therefore be cared for by public officials, says one of the horticulturists of the U. S. Department of Agriculture in a recent bulletin on "Street Trees." Trees on well-shaded streets not only contribute enjoyment but health by transpiring moisture and producing a restful effect on eyes and nerves.

Good shade trees add to the value of adjoining properties. In fact, even in pictures, a house with trees and shrubbery will attract a buyer when the same structure without them would be disregarded.

Mixed plantings of different kinds of trees are not so pleasing and effective as the use of a single species for considerable distances. On the other hand monotony will result if the same species is used for an entire town or section. The varieties of trees suitable for city planting are not many, so all native to the section may be used, usually assigning one variety for a long stretch of street. Street trees are often planted too close together for the mature tree to thrive, a common practice being to plant them 35 feet apart although 50 or 60 feet would be ultimately a better distance.

A street tree must have healthy foliage that withstands dust and smoke, a root system adapted to unusual soil conditions, restricted feeding area and root pruning where street improvements are made. In the smoky heart of a city the ailanthus or tree of heaven will probably thrive when nearly all other kinds fail. So also may the sycamore and plane. These are suitable for nearly all sections of this country. The maple is not so suitable a tree for street planting as many suppose because it is not sufficiently rugged except under suburban conditions.

The top of a street tree should be in proportion to the width of the street on which it stands, and should be of open growth without being too spreading. Narrow streets should be planted with columnar trees like the Lombardy poplar, or sometimes with small trees; broad streets with spreading trees like oaks or elms. The oak is designated as best for nearly every section of the country because of its hardiness and beauty.

The planting and culture of street trees makes up a goodly part of this interesting bulletin.

Wooden Houses in England

The first permanent wooden house under the new building scheme was completed and occupied near Norwich, England, the last of November, according to the American Consul at London. The house was erected by a Norwich firm which has converted its aircraft factory into a workshop for making standardized sections for these houses. The manufacturers state that they will be able to turn out similar houses at the rate of 50 per week. The total cost, providing for six rooms, is about $3275 (at normal exchange) and such houses may be completely erected within one month.

Health More Important Than the Picturesque Landscape

The old oaken bucket that hung in the well may be dear to the heart, but it's dangerous to the system, writes *Modern Hospital.*

The time-honored wellsweep and windlass were one of the picturesque features of the typical Polish landscape—until Polish and American Red Cross sanitarians at the head of the Polish public health work decreed that health was more important than landscapes. Though the bubbling spring by the roadside sounds well in poetry and the maiden drawing water from an old-fashioned well is pretty in pictures, every open well is a potential epidemic breeder. With typhus and cholera raging throughout Poland, these wells are considered by the health authorities a direct means of contagion, exposed as they are to all sorts of contamination.

The American Red Cross health experts, who are co-operating with the native government in formulating a permanent health program, have discovered substitutes for the old wells. In the supplies abandoned by the Germans when they were forced to quit the country were found hundreds of pump connections, suction joints and valves in salvage warehouses. These will be used in addition to the modern wells which the Americans are constructing in several towns.

The Picture Post Card

A valuable idea is contained in the suggestion of Thomas E. Tallmadge, of the architectural firm of Tallmadge & Watson, and director of the Municipal Art League, Chicago, who has sent the following notice to members of that organization:

The picture post card has long been secure in its place, not only as a cheap and convenient means of communication, but as a silent educator in geography, history and art. Very little consideration has been given the publication of post cards, and their educational possibilities have not been appreciated. The result has been that, with few exceptions (such as the beautiful series published under the direction of the Art Institute), the local market has been flooded with cards which have misrepresented our beautiful city and must have exercised an evil effect on the artistic perception alike of the purchasers and the recipients.

The Municipal Art League believes it would be a good work to direct the publication of a worthy series of cards of Chicago and vicinity. They should depict the most valuable and interesting subjects and be executed in the

most artistic manner possible. To this end members of the League are asked to send a list of subjects or photographs of points of especial historic or artistic interest or of natural beauty with which they are acquainted or any similar subjects anywhere in or near the city which it is believed have been neglected.

The ramifications of this idea are of course extensive, and if it were generally accepted much good would be accomplished in bringing the dignities of art before the public.

Farming on the Desert

More than 200,000 persons now occupy prosperous homes in what were American deserts and produce an annual crop worth $100,000,000 from lands which a short time ago returned nothing. Director Arthur P. Davis, of the United States Reclamation Service, Department of Interior, says in his annual report that the progress being made by these communities equals that of the most prosperous regions of our country.

"During the present year the service is in position to deliver water to about 1,600,000 acres of irrigable land, covered by crop census, of which about 1,120,000 acres are now being irrigated," Mr. Davis says. "Besides this, storage water is delivered from permanent reservoirs under special contracts to about 950,000 acres more. The projects that have been undertaken have been planned to provide for an area of about 3,200,000 acres.

"Agriculture in the arid region where irrigation is feasible has several important advantages over that in the humid region. The soils of the arid region by the nature of the case have generally not been leached of their mineral plant foods as have those in the humid region and they are, therefore, much richer in this respect on the average and are seldom or never acid.

Inventor of Cubist Painting Found Dead

M. Modigliani, an artist who claimed to have invented cubist painting, was found dead in a miserable hovel in the Latin quarter of Paris a week ago. He used to frequent artist cafes dressed in trousers with the legs made of different materials.

An Architects' Building for Chicago

Chicago architects are to have an office building of their own in the near future, if plans now under way are successful. The building project grew out of the recent membership campaign of the Western Society of Engineers, which has added to its roster materially, thus increasing its financial stability. Consequently, when the local architects were approached on the subject of a distinctive architects' building, which would house not only architects, but engineers, contractors and building concerns as well, the Illinois Society of Architects, of which Chas. Herrick Hammond is president, took up the matter and appointed a committee to aid in the work. D. H. Burnham was chosen as chairman of the committee from the society.

The proposed building will have not only space sufficient to house the leading architects' offices of the city, but will be provided with club rooms and meeting rooms for the various affiliated societies of architecture and engineering. It is probable that a bond issue will be floated to aid in financing the structure which it is hoped to make one of the finest buildings in the loop. Several locations are under consideration.

Avery Library of Architecture at Columbia University

The largest architectural library in the Western Hemisphere, and probably the second or third largest in the world, has been definitely linked with the School of Architecture of Columbia University by the appointment of William B. Dinsmoor as librarian and as the member of the instructing staff of the school.

This library, consisting of 25,000 volumes relating to architecture and the allied arts, is located in Avery Hall on the Columbia campus. It was completed in 1912 as a memorial of the late Samuel P. Avery and of his son, the late Henry P. Avery.

Although the School of Architecture has been occupying three floors of this same building, and has been in constant contact with the Avery Library, the school and the library have been distinct departments of the university. A definite connection is now assured by the appointment of Mr. Dinsmoor.

Mr. Dinsmoor holds a degree from the Architectural School of Harvard University and has specialized in the history of architecture and art. He is the author of numerous articles and books on this subject and has made extensive archaeological studies in Greece.

The Avery Library Building makes ample provision for drawing, drafting and study. Rooms are set apart for the study of books and photographs and there is a large exhibition room for design and other current work. The Architectural Library is open to the public daily from 9 a. m. to 6 p. m. and from 7 to 10 p. m.

Frequent public exhibitions in the library have included the collections of the works of the late Belgian sculptor, Meunier, and of Gutzon Borglum; the late J. Pierpont Morgan's collection of mediæval and renaissance manuscripts; engravings of French masters of the seventeenth and eighteenth centuries; American tapestries and furniture; prize competition works in architecture; and sculpture and paintings of the American Academy in Rome.

To Strengthen Strasbourg Cathedral

The foundations of Strasbourg Cathedral, Alsace-Lorraine, which for several years have been in such condition as to threaten the safety of the building, are being removed and new foundations will be built. The Cathedral stands on oak piles driven into the ground and in recent years these have begun to rot.

Strong reinforced concrete walls are being built on either side of the old pile foundation. Hydraulic jacks will be fitted on these walls to support the weight of the building. Passages will be pierced between the concrete walls to permit the removal of the old foundations and the installation of the new.

Michigan Architects Elect Officers

The Michigan Architects' Society has elected the following officers:

President, Clarence L. Cowles, Saginaw; first vice-president, Alvin E. Hartley, Detroit; second vice-president, H. L. Madd, Grand Rapids; third vice-president, J. B. Churchill, Lansing; secretary, Roy L. Barnes, Detroit; treasurer, H. J. Keough, Detroit; directors, Gustav Steffens, Harry Angel, E. A. Schilling, W. G. Malcomson, George Haas and Richard Marr, all of Detroit; Fred Beckissinger, Saginaw, and A. E. Munger, Bay City.

Improving Farm Buildings

Just now, before the spring sowing season is on, the farmer can well plan for the betterment of his buildings, justly comments the National Lumber Manufacturers' Association of Chicago. The loss of implements from poor housing has been a frequent subject for agitation, to say nothing of the loss of time and convenience to the farm worker who has to use rusty and ill-kept machinery; the inadequate return from stock which are poorly sheltered and warmed is well worth investigating; and the discomfort and dissatisfaction to the farmer, his family and help from working and living quarters which are not modern, convenient, well-kept and commodious is a condition that can be remedied, especially now that the farmer is so well paid for his produce.

Pantheon for Brazil

Proposal has been made that a national pantheon for all the illustrious personages of Brazil should be erected there in connection with the celebration of the centenary of Brazilian independence in 1922.

Plans for this 100th anniversary which have been submitted to the Chamber of Deputies would cost $12,500,000. They include an exposition of fine arts, erection of a national historical museum, and composition of an historical opera and a drama.

The scheme also provides for the organization of a great university. Sports will be one feature of the celebration.

It is proposed to hold the celebration in September. Brazil separated from the Kingdom of Portugal and was proclaimed independent by Don Pedro I, the first Emperor of Brazil, September 22, 1822. This proclamation took place in Sao Paulo and it is proposed to erect there one of the finest commemorative monuments in the new world.

Announcement of Examinations for Rotch Travelling Scholarship

The Rotch Travelling Scholarship on account of war conditions has not been awarded for two years, but will be resumed this year. Preliminary examinations will be held at the office of the secretary, C. H. Blackall, 20 Beacon Street, Boston, on Monday and Tuesday, April 12 and 13, 1920, at 9 a. m., to be followed by the sketch for Competition in Design on Saturday, April 17, 1920, at the Boston Architectural Club, 16 Somerset Street. The successful candidate will receive annually for two years an amount which it is hoped will not be less than $1400 per year and maybe more, depending upon the funds, this amount to be expended in foreign travel and study during two years in the employ of a practicing architect residing and must have been engaged in professional work for two years in the employ of a practising architect residing in Massachusetts. Holders of a degree from a recognized architectural school may present their certificates in lieu of the preliminary examinations. Candidates are requested to register at the office of the secretary as long before the examinations as practicable.

Tree Seeds for Europe

To reforest the devastated areas in France and Belgium and to replace the British forests cut down for war purposes, the American Forestry Association has formally presented to these countries through their consuls, thirty-five million tree seeds. The bags containing these seeds were piled on Boston Common before shipping and made a mound some eight feet high and as many feet square.

Important Building Program at Rome

An interesting feature of the new building program at Rome, according to the U. S. Trade Commissioner in that city, is provision for the immediate erection of two entirely new suburbs outside of the present city limits and for these suburbs an attractive type of small cottage has been selected which resembles American or English design more than Italian.

One of the new "garden cities" as they are called, located east of Rome, will have sufficient houses to accommodate several thousand families. More than 2000 families, including many officials and employes of the State Railway Administration, have already made application for accommodations. Every effort will be made to render the new suburbs as attractive and complete as possible. Many thousands of shade trees will be planted and schools, churches and other public buildings will be erected immediately. Within the city limits an extensive building program is being carried out, the housing problem in Rome having reached an acute stage some time ago and many thousands of people living in temporary and crowded quarters. The execution of the program has been entrusted to a special committee, presided over by an Under-Secretary of the Ministry of Industry, Commerce and Labor.

California Land Settlement Scheme Favorably Progressing

Although but little more than a year old, the California State Land Settlement at Durham, just north of Sacramento, is attracting widespread attention as the first settlement of its kind in the country. When the 6219 acres were purchased by the state in 1918, mostly from Stanford University, for somewhat over a half million dollars, no landowner had lived on it for 20 years. To-day 120 families live in their own homes and till their own fields and in these homes are more than 200 children. All the homes are built of wood and are mostly in bungalow style; 22 acres, a part of which is an oak grove, have been set aside for a community center.

Not only is provision made for farm owners but it is recognized that some settlers may not wish to have the responsibility of owning and keeping up a home, but may prefer to work for wages. There is need also for carpenters, blacksmiths, etc., and smaller tracts for these wage-earners have been allotted.

Attention has been especially directed to the movement because of its being an attempt to solve in a definite way some problems of rural life. In 1919 the state legislature appropriated a million dollars to continue the settlement policy and it is hoped that the next area purchased will be large enough to provide homes for 250 settlers; more than twice this number have already registered as applicants for farms or farm workers' homes. In its report the Board is asking to hear from owners or others interested as to where suitable land may be purchased for other settlements.

The work does not end with buying land and selling it to settlers on favorable terms; it promotes a strong community spirit and helps settlers overcome obstacles which lack of capital always presents.

Competition for Memorial Designs

The Memorial Crafts Institute, a society of designers, craftsmen and dealers in memorials and carved stone, is holding a competition among architects and others interested for designs for a small public memorial. It is the purpose of the exhibition committee to create a more general appreciation of the architectural possibilities of cemetery and public memorials. There will be three prizes, of $150, $100 and $50 respectively. The competition will close on March 10. Further details may be had by addressing Ernest S. Seland, 56 Ninth Avenue, New York City.

Ohio Builders Urge Fire Prevention

This resolution was passed by the Ohio Builders' Supply Association at the convention held at Columbus, Ohio, January, 1920:

WHEREAS, The housing shortage in the United States to-day creates a serious situation, and

WHEREAS, The fire losses reported in 1917 to the National Board of Fire Underwriters amounted to $66,166,420, in 232,021 residences; and

WHEREAS, The cost of material and labor is constantly mounting so that individual losses are likely to be greater year by year, cutting down our national resources to a tremendous extent, and aggravating the housing situation to an unnecessary degree;

BE IT THEREFORE RESOLVED, That this Association go on record as to the necessity of giving more adequate fire protection to the combustible members of residences.

BE IT FURTHER RESOLVED, That each member of this Association be advised of the situation and be requested to advise prospective owners of the situation and furnish full information as to the best available methods of protecting such structures.

News from Various Sources

The Utica Chapter of the New York State Association of Architects has been formed.

* * *

Many new fire hazards are being introduced by the fuel shortage. The most serious of these arises from the large amount of soft coal which is being stored in the basements of dwellings, apartment houses and mercantile buildings and on the premises of factories.

* * *

Plans for the reconstruction of Rheims, prepared by George S. Ford of New York City, formerly an officer in the American Red Cross, have been virtually adopted by the Municipal Council of that City.

They affect principally the damaged districts and the Cathedral, where the general aspect of the quaint old thoroughfares and the characteristic ancient architecture will be preserved.

* * *

Senate provisions authorizing the Secretary of War to turn over to the public health service such surplus hospital furniture and medical supplies as may be required by health service hospitals were recently adopted.

* * *

Department of Agriculture announces issue of bulletin, Rural Community Buildings in the United States.

* * *

Bureau of Memorial Buildings of War Camp Community Service, New York, issued publications: "Architecture of Large Memorial Buildings"; "The Architecture of Memorial Community Houses."

Personal

O. P. Dennis has opened an office in Room 322 Markham Building, 6372 Hollywood Boulevard, Los Angeles.

G. E. Griewank, structural engineer, has opened offices at 516 Call-Post Building, San Francisco.

Richard C. Farrell, who has been practicing architecture in Long Beach, Cal., has opened an office at 532 Mason Building, Los Angeles.

Walter Webber has removed his architectural offices in Los Angeles from 718 Ferguson Building to 1017 Hibernian Building.

Edward Cray Taylor and Ellis Wing Taylor have moved their offices from 605 Merritt Building to larger quarters in suite 807 Merritt Building, Los Angeles.

J. Constantine Hillman, of Pasadena, who has been away for some time attending to outside work, has returned and established an office in the Central Building, Pasadena.

Edgar H. Cline, who served two years as captain in the construction division of the quartermaster's department, U. S. A., has returned to Los Angeles and resumed the practice of architecture, with office at 446 Douglas Building.

Houghtaling & Dougan, architects, who have maintained onces in the Henry Building, Portland, Oregon, for some time, have had new offices and a studio fitted up on the second floor of the Elk's Club Building, Portland. They are now prepared to receive catalogues and literature to complete their files.

A. G. Nelson, architect, formerly of Ironwood, Mich., now has charge of the architectural department for Heuer & Cargill, Hibbing, Minn.

Donald C. Bollard, architect, has opened offices in the McCague Building, Fifteenth and Dodge streets, Omaha. Mr. Bollard was with the Bankers Realty Investment Company.

Commander Clyde Kelley has returned to Duluth after eighteen months of strenuous experience in the United States Navy, and has returned to the architectural firm of Kelley & Schefchik, Alworth Building.

Charles R. Kaufman has withdrawn from the firm of Morse & Kaufman, architects, Twin Falls, Idaho, and has opened offices in the Babcock Building, that city, for the practice of architecture. Samples and catalogues are desired.

Wallace W. Donaldson has opened an office at 69 Ruggery Building, 20 East Gay Street, Columbus, O., for architectural practice. Catalogues desired.

J. M. Whitehead, architect and engineer, Okmulgee, Okla., has opened offices, Room 12, Reibold Building, and desires catalogues and samples.

F. A. Bishop, architect, Sycamore Street, Petersburg, Va., has moved to the Terminal Building, Petersburg, Va.

Carl E. Macomber, architect, has opened an office in the Forrester Building, Franklin and Federal Streets, Saginaw, Mich.

William Emerson, New York architect, recently accepted the directorship of the Department of Architecture at the Massachusetts Institute of Technology.

Weekly Review of Construction Field

Comment on General Conditions of Economics With Reports of Special Correspondents in Prominent Regional Centers

THERE are at least two spots of labor unrest in the building trades, at New York and Chicago, respectively, which endanger the movement of building operations. Whether prices of building materials are at a peak or on a plateau are questions which drop into insignificance before the suggestion that strikes are in prospect.

So imperative is the need for building that speculation upon a possible reduction of prices could not detain its progress. Neither would it wait for the time when a reduced cost of living and an increased immigration might combine to produce a reduction of labor expense. The need for housing is so vital to society that it must be satisfied.

If the refusal of capital to invest in building ever could stop such development the enormous figures of business contracted carry the implication that it has no intention of doing so just now. It is also conceivable that contractors might refuse to accept business because of the almost insurmountable difficulties of accomplishment, but this also is far from the present fact. But far more serious obstacles are placed in the way of supplying the public demand for housing when labor reiterates its right to strike and even proposes to make that right effective, and those who feel responsible are deeply concerned.

English builders in a similar effort met with a similar handicap. The wage rates in their building trades had increased 110 per cent during the war; yet at its close the feeling that it was right and proper to take a holiday upon an unemployment pension worked havoc with building plans—to the discomfort and even suffering of the people. Inactivity of labor in such cases is a clear case of a shirking by the public of responsibility to satisfy its own needs.

In the preparation of our new railroad bill the right to strike has been considered and, at the request of labor, has been affirmed. The right of the public to depend upon adequate service is thereby revoked. However competent a service may be, if it cannot be depended upon when it is needed it isn't worth much.

It seems as though not only prices reach peaks and then come down but that the public endurance of the arrant failures to satisfy its needs also must reach a peak. There are well developed methods of arbitration, but more forceful with the public than the intelligence that strikes are unnecessary is its enforced realization that it is paying with discomforts while the dispute goes on.

The dramatic fiasco of the railroad strike in France should encourage us to believe that the destructive phase of labor radicalism is losing whatever influence it had. The French people saw no reason why they should put up with inconvenience and loss, or why they should declare sympathetic strikes in order that a radical minority might dictate to the Government its railroad policy. It is well for France that they had the good sense to avoid such costly and dangerous methods. It will be well for our economic comfort when we make it known that we arrive at a similar conclusion regarding our strikes and lockouts.

A stoppage of needed work in order to enforce demands for higher wages, a tearing down of steel framework in order that it may be erected by union men, are actions which will certainly antagonize a nation which is impatiently clamoring for that work to be done.

Day by day new evidence of the public opinion in such matters comes out. From St. Louis it is reported that a temporary restraining order has been issued which forbids the calling or fostering of strikes in the International Brotherhood of Electrical Workers by the local officials of that organization. The order was issued on application of a telephone company, which asserted that thirty-nine striking wiremen were interfering with interstate business.

OUR exports are shrinking each week. The large industrial companies are beginning to show decreased earnings. And the people must soon realize that war profit days are over, that extravagance and speculation must end. This will leave a more open field for the production of such necessaries as buildings. The country's building construction is almost five years behind and it cannot be expected that an overproduction will lower the prices of buildings or of the materials and labor which go to make them, at least for years to come. In fact, it is going to be difficult to keep the production up to the constantly growing demands.

IN its monthly survey, the Federal Reserve Board says of the building situation: "In spite of exceedingly high costs of building material, the intense shortage of accommodations is causing a great growth in building operations in many parts of the country. On the Pacific Coast an increase of nearly 30 per cent is noted as compared with December, while as compared with January of last year permits issued are nearly four times as great.

"In the Southwest an even larger ratio of increase has been noted. On the basis of incomplete statistics: District No. 10 (Kansas City) reports a relative increase of 467 per cent. during the past year, while District No. 11 (Dallas) reports 839 per cent. Great building expansion in 1920 in the southwestern part of the country is accordingly anticipated. In the Middle West permits issued have been far in excess of the corresponding month of last year. In the East and Northeast, where the movement toward increased building started perhaps earlier than it did in the other parts of the country, the growth is not always so noticeable, relatively speaking, but the activity is still considerably on the increase.

"Difficulty in obtaining deliveries of building materials have been severe. Scarcity of cars has prevented the movement of lumber and heavy building materials and the effect of this situation will be to restrict the early Spring progress in construction.

"Labor conditions are quite generally reported throughout the country as being in fairly stable position. The most unfavorable aspect of the labor outlook is the tendency reported from various districts toward restriction

of output. Even in those cases, however, where this tendency is noted, the opinion is occasionally expressed that the effect of the restrictive policy in injuring those who practise it is beginning to be better understood. Scarcity of labor is noted in many districts, particularly in the agricultural regions, and as a result reduction in the acreage of farms and the output in some manufacturing lines is foreseen. An especially acute situation in farm labor is reported from the Southwest. In the Eastern manufacturing districts notable increases in the number of men employed and in the advance of factories toward capacity production have occurred. In some specialized industries, however, either strikes or shortage of raw material have led to restriction of output, although such interferences have not been extensive. Many plants which during the war were not able to bring more than a substantial percentage of their machinery into active operation have succeeded in getting much closer to total activity. It is noted, however, that even those plants which are running at full capacity are in some instances unable to turn out as much as in pre-war days. From Cleveland it is reported that one large employer of labor finds that while the numerical strength of his staff has increased 11 per cent., the augmented force is producing 14 per cent. less than the old force. On the Pacific Coast labor has been fully employed and unemployment during the Winter months has been purely nominal."

In regard to financial changes, the Reserve Board says: "During the month of February there was a continuation of the heavy demand for funds which had been characteristic throughout the country for more than ninety days. Advances in rates of interest, both for call and time money, and for commercial paper, carried the general cost of loan funds up to a figure probably in advance of any that had been recognized in the United States for some years past. Coincident with these advances in the cost of loan funds was a decline in the quotation of the best investment securities, while on the whole a shrinkage or contraction in the volume of trading in all classes of securities through the country was observed. In the opinion of some districts there were also indications of a reduction in the volume of speculation in commodities. The effects of the increase in rediscount rates at Federal Reserve Banks made themselves evident in a more conservative attitude on the part of banks in general with respect to industrial expansion and in the cutting of commitments on speculative account."

A SPECIAL correspondent to THE AMERICAN ARCHITECT reports from San Francisco that the general rise in building material prices seems to have little effect on the volume of buying. Stock in various lines of material is just as largely ordered as it was before the new scale of prices went into effect.

Steel continues scarce, with the market exceedingly tight on nearly all types of steel construction material. According to reports from local dealers, the difficulty in filling orders is constantly growing.

Hardwood, too, is in just as big demand, despite the acute jump taken last week in the price of finishing woods. While it was impossible to quote decisively on a number of other lumber prices, it was the general opinion of local yard dealers that prices on California woods, pine and redwood, were liable to take another jump before the mills were started on 1920 operation.

Labor difficulties are said to be responsible for the increase in common and face brick and in hollow tile. Factories in this vicinity are sold up to the last notch and all quotations are now being based on present freight rates, as another advance is anticipated shortly.

From local offices of architects come the reports of plenty of business at this time, as well as a good line-up of future contracts which are planned for later in the year.

(By Special Correspondence to THE AMERICAN ARCHITECT)

SEATTLE.—Scarcity of the finer essentials in building hardware is bearing down heavily upon building commitments in the North Coast building and distributing territory. Many unfinished buildings are exposed to the ravages of weather, pending relief. Small nails, plumbing fixtures and small pipe are leading in the scarcity.

Fir lath is off $5 per 1,000. Glass sidewalk lights are up 10 per cent. Small building projects are easing off for lack of materials and high lumber prices have broken this week $5 to $10 per 1,000 feet. Oak flooring has gone to $300 per 1,000 feet. As a direct result of the advance in finishing materials, the larger projects, running from $25,000 to $30,000, are being abandoned and smaller and less pretentious buildings are being erected. Office room is very scarce and it is almost impossible to secure a modern three to five-room apartment in the city.

There is a plentiful supply of cement, but the car shortage local production. The market is firm but unchanged. Because of the excessive costs of lumber, builders have from time to time contemplated the use of hollow building tile for dwellings, but it is believed that investigation has shown that in this climate, which is rainy from October to April, the material absorbs moisture and dampness would ultimately make such a house uninhabitable. However, the hollow tile is being utilized for warehousing.

Steel manufacturers of the East are still firm in the declaration that they will undertake no new commitments until after June, and then only at the market prices of the date of loading. Seattle jobbers report that there are a number of houses brought to completion excepting the plumbing, but which now stand idle awaiting a supply.

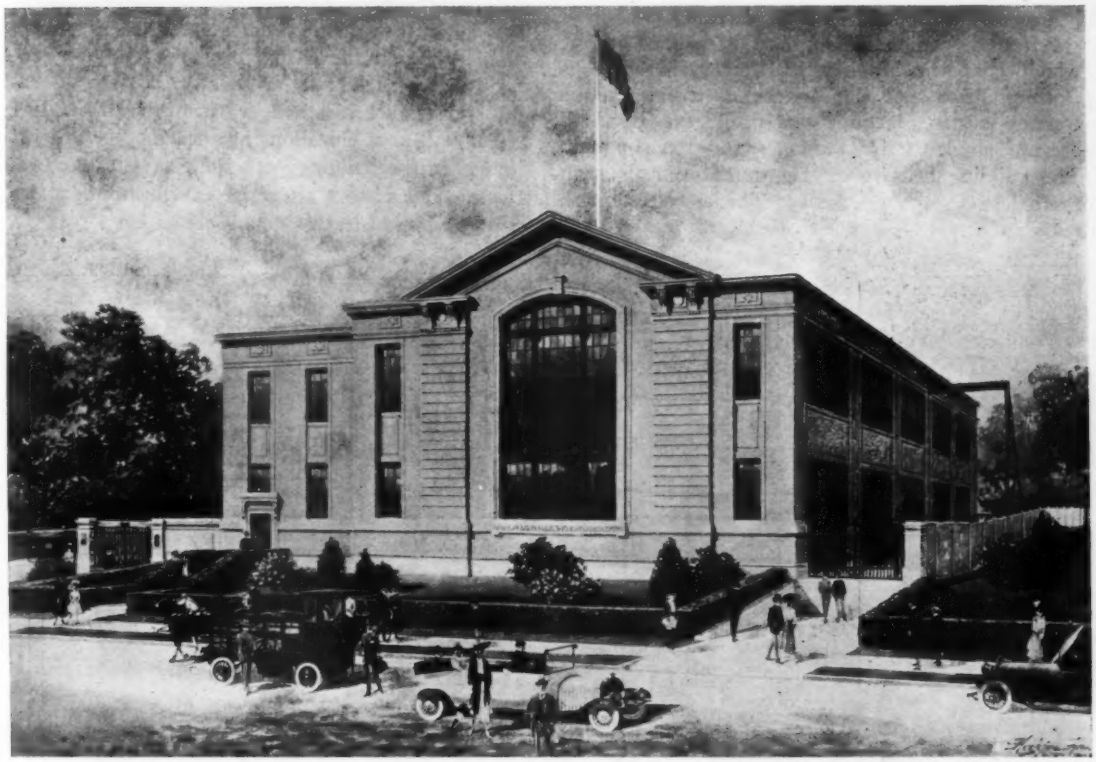
There is a plentiful supply of cement, but the car shortage is preventing delivery.

Jobbers of building hardware report that Eastern manufacturers are facing the problem of getting out heavy material while far behind in orders for eight-penny nails and the like. Jobbers are now rationing nails out with a small percentage of kegs to each job. Veterans of the trade declare that not in forty years has there been such a scarcity of building hardware. All the ¾-in. and larger steel tubing that is necessary can be secured, but the smaller sizes are almost unobtainable. There are plenty of spikes of 5 inches and larger, indicating the scarcity of all smaller essentials of building.

Due to the official announcement by one of the largest manufacturers in the State—of reductions of $10 to $20 in all building sizes of lumber—the lumber market is unsettled. Transit cars are massing in the East due to lack of sale.

The car supply is improving.

Department of Architectural Engineering



SUB-STATION AT FLUSHING, L. I., BUILT FOR NEW YORK & QUEENS ELECTRIC LIGHT & POWER CO.
WILLIAM W. KNOWLES, *ARCHITECT*

Architecture and Engineering

Efficiently Combined in Sub-Station Recently Completed at Flushing, Long Island, for New York & Queens Electric Light & Power Company

By WILLIAM W. KNOWLES, *Architect*

DURING recent years the invention of many additional machines and devices for use in both the industrial plant and the home, which utilize electricity as the motive power, has resulted in a greatly increased demand for such service, and this is daily growing larger. The result of this demand has been the construction of additional power plants or the enlargement of existing ones, and also the construction of many additional sub-stations properly to distribute the power to the districts most needing it.

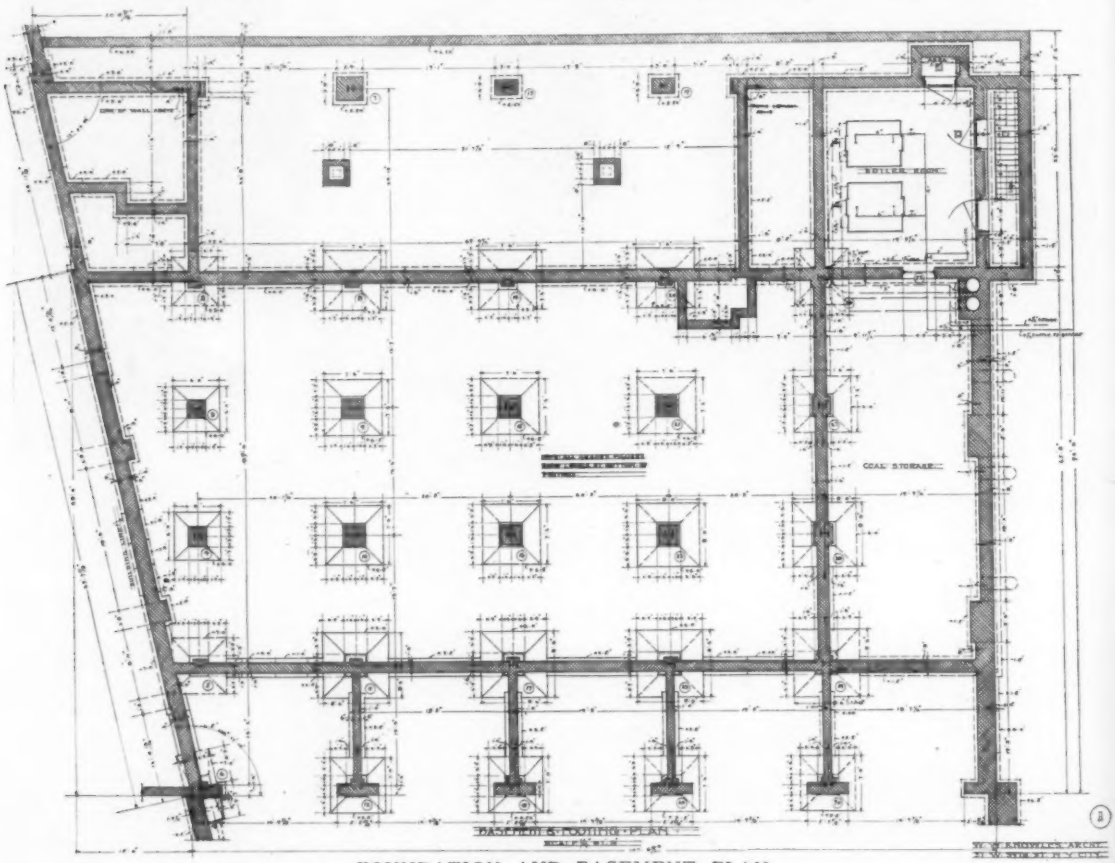
The New York and Queens Electric Light and Power Co., organized in 1900, at present serves a territory covering an area of some 108 square

miles and having a population of approximately 350,000 persons. Included in this district are Long Island City and the Astoria section, two of the most rapidly developing industrial sections of the Greater City, as well as Flushing, Jackson Heights, Garden City, Kew Gardens and many other residential sections where housing developments are being carried forward on a large scale.

After the completion of the Queensboro bridge, which connects Manhattan Island with Queens Borough, and also due to the extension of the traction system, large areas in Queens Borough became immediately available for development. The building activity at the present time is such as to lead one to prophesy a phenomenal growth within the next few years.

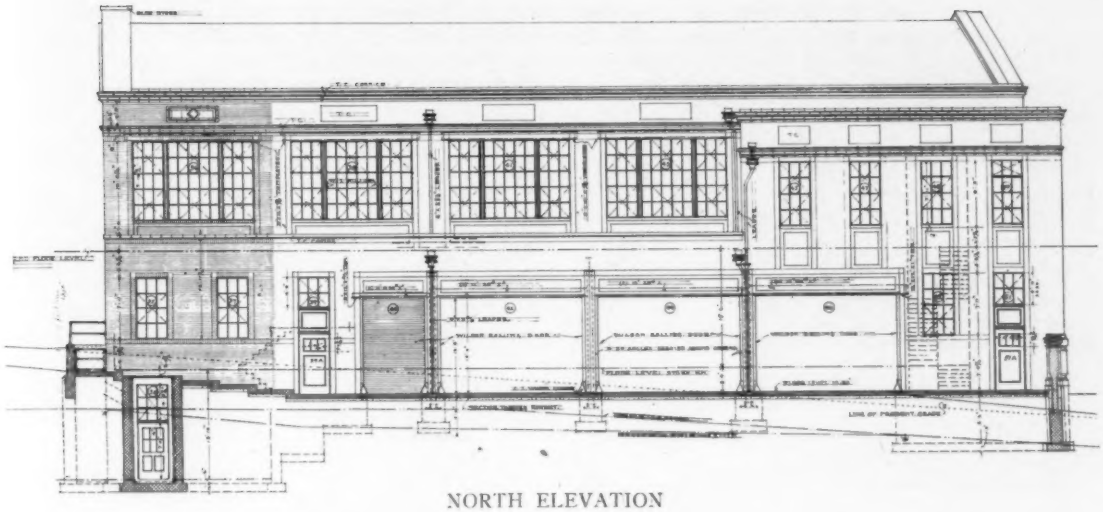
In order to meet the increased demands for electric current the New York and Queens Electric Light and Power Co. have been obliged constantly to extend and increase their facilities. Two additional sub-stations, supplying the outlying districts, have recently been completed. One of these, which is illustrated in this article, is located on Lawrence Avenue, Flushing. Its function is to step down the high voltage current delivered from the generating power house to a low voltage suitable for commercial use.

The drawing reproduced on page 195 illustrates the appearance of the completed building as it will look after the planting scheme has been worked out. While to the casual observer the structure might not be taken as an electric power sub-station, yet in fact it is a heavy commercial building and its different elevations are designed to express the use of the building with sufficient architectural treatment to make it attractive in appearance and a worthy addition to this quaint community.

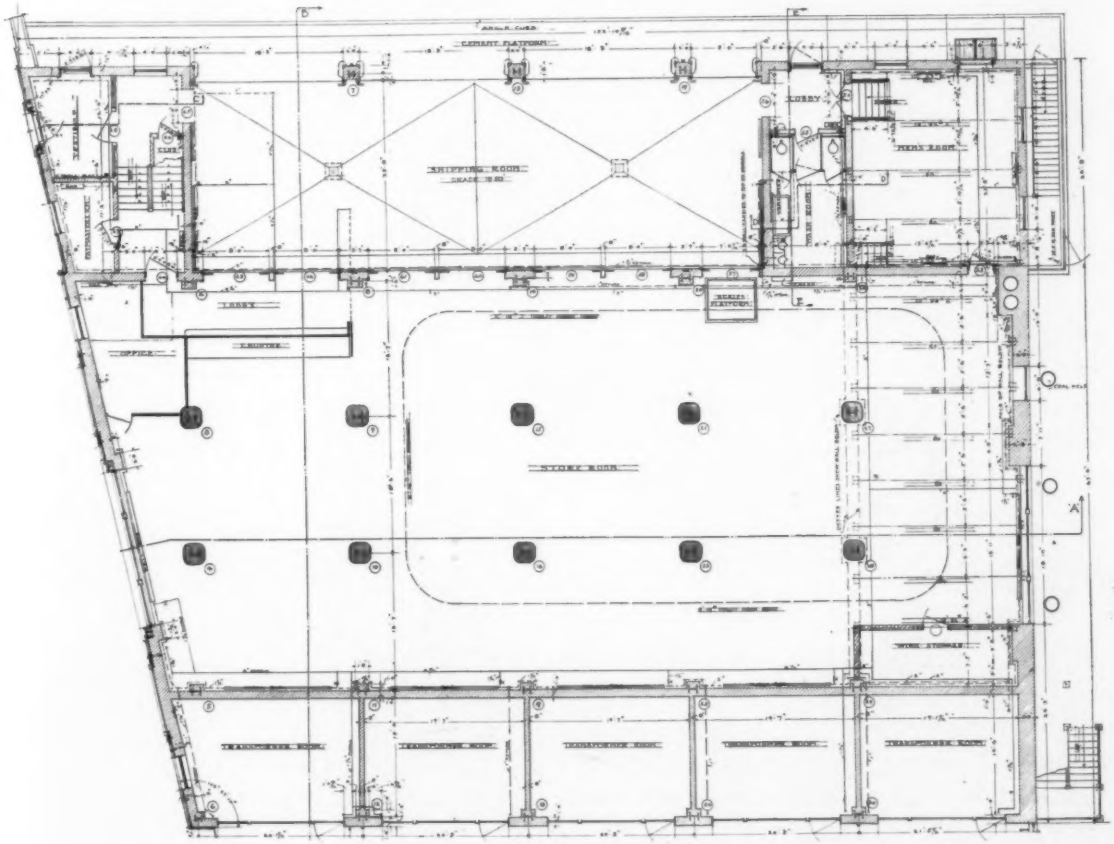


FOUNDATION AND BASEMENT PLAN

Since in a plant of this nature there are no power boilers or reciprocating or other vibrating machinery, the operation is practically noiseless, and the additional expense of building the structure along artistic lines is believed by the owners to have been a wise expenditure.

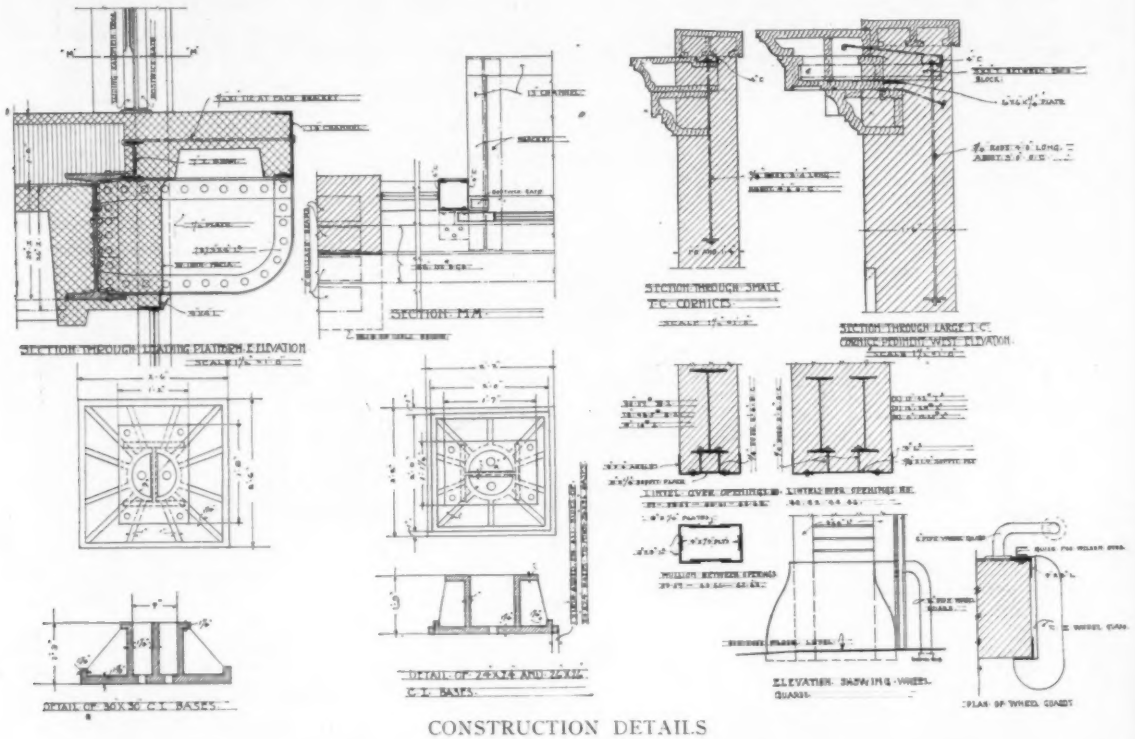


NORTH ELEVATION



GROUND FLOOR PLAN

Due to the irregular shape of the plot the street façade does not form right angles with the side walls. This, however, while slightly complicating the construction, does not in any way detract from the general appearance of the building. In ground plan the building has a frontage of 95 feet on Lawrence Avenue, a width at the rear of 92 feet, with an average depth of 113 feet. The height from grade to top of ridge is approximately 48 feet. The building is purely utilitarian. The essential features of such a plant are the compartments housing the transformers, and a large operating room for the control and distribution of the current to the street surface lines.


SECTION M-M.
SECTION THROUGH LOADING PLATFORM & ELEVATION
SECTION THROUGH SMALL T.C. CORNICE
SECTION THROUGH LARGE T.C. CORNICE PARAPET WALL ELEVATION
DETAIL OF 30"X30" C.I. BASES.
DETAIL OF 24"X24" AND 26"X26" C.I. BASES.
ELEVATION SHOWING WHEEL GUARDS.
PLAN OF WHEEL GUARD

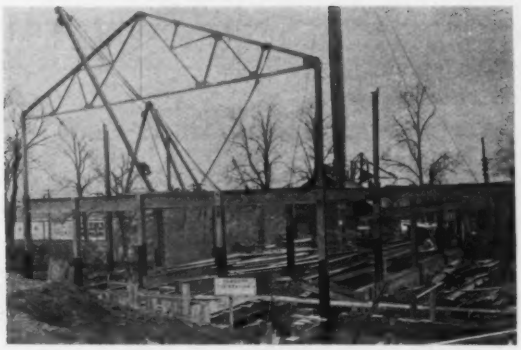
CONSTRUCTION DETAILS

As these two features, namely, transformer compartments and operating room, do not occupy the entire structure which is required for their proper housing, and as leaving waste space would be extremely uneconomical, especially at this time of high building costs, the balance of the building is utilized for the storage and distribution of street line equipment, and in addition provision is made for the night storage of the emergency trucks.

As will be noted from a study of the ground floor plan, there are laid out along the southerly side five fireproof transformer compartments, so located that the feeders from the top of the transformers accommodated therein can readily pass through the ducts in the floor overhead and thence to the operating switches on the floor above. The transformers are of heavy weight, namely, 30 tons each, and it is necessary so to arrange the compartments for their housing as to require a minimum amount of handling in their placement. This is the reason for locating these compartments on the ground floor, and it will be noted that they open on to the south driveway. The balance of the ground floor is used for the storage of street line equipment and the distribution of same, both over the counter in small lots and by automobile trucks for working crews. In addition a men's room and lavatory and also offices are provided on the ground story. The automobile trucks used for repair and emergency work are backed into the building against a loading platform on the north side, and loaded during the night so as to be ready for the following day's work. Incorporated with this latter feature is the large room for the linemen, which is equipped with lockers, showers with washroom adjoining.

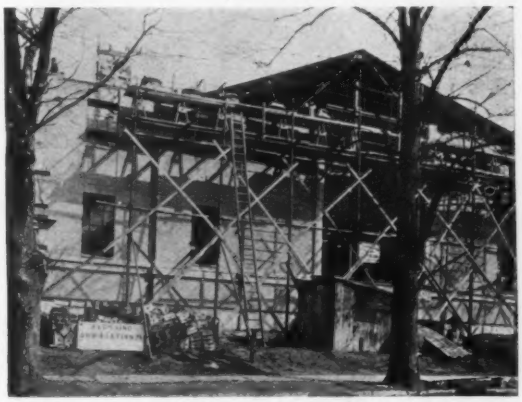
The north side of the shipping room is equipped with large vertical sliding doors at the four open-

NO. 1. FOUNDATION WORK IN PROGRESS. SOME OF C. I. COL. BASES SET; PART OF STEEL ON JOB AND READY FOR ERECTION. BUILDING OF BRICK WALLS COMMENCED

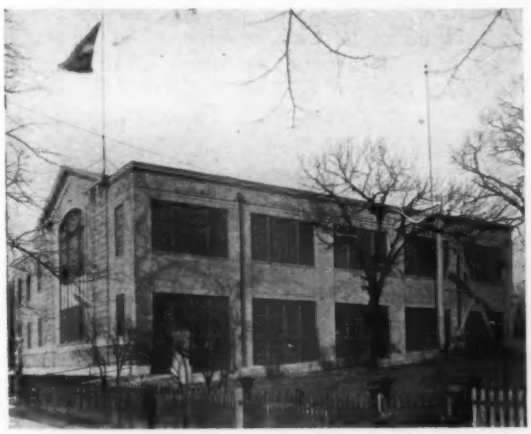


NO. 2. ONE WEEK LATER. STEEL IN COURSE OF ERECTION

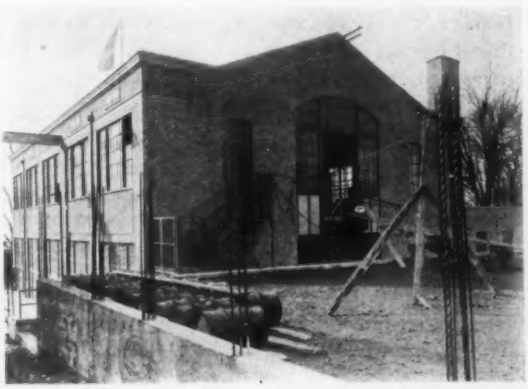
NO. 3. THREE WEEKS LATER. STEEL ERECTION COMPLETED. MASONRY WORK IN PROGRESS



NO. 4. THREE MONTHS LATER. FLOOR AND ROOF ARCHES COMPLETED. WALLS NEARLY TOPPED OUT



SOUTH ELEVATION SHOWING LOUVRE CONSTRUCTION INSTALLED IN LARGE OPENINGS OF TRANSFORMER COMPARTMENTS



REAR ELEVATION. NOTE HOISTING BEAM AND LARGE OPENING OF OPERATING ROOM FOR PLACING EQUIPMENT

PROGRESS VIEWS—FLUSHING SUB-STATION FOR NEW YORK & QUEENS LIGHT & POWER CO.

WILLIAM W. KNOWLES, *ARCHITECT*

FRONT ELEVATION, FLUSHING SUB-STATION,
N. Y. & QUEENS ELECTRIC LIGHT & POWER CO.

WILLIAM W. KNOWLES, *ARCHITECT*

Contemplated Planting Scheme Not Developed When Photograph Was Taken

ings, giving ingress and egress to the automobile trucks, and the floor is of cement, provided with two drains so that the trucks may be washed in this space as well as stored therein. These features are clearly shown on the ground floor plan and north elevation.

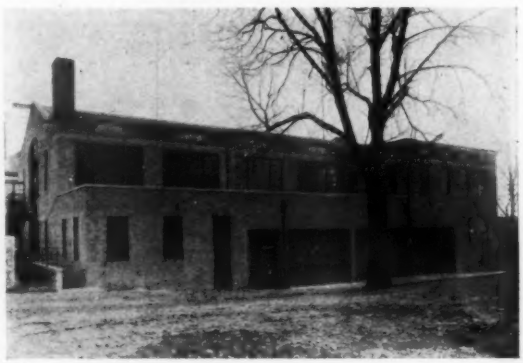
On the second floor the large operating room, 106 feet by 65 feet clear span, is located. Here the oil switches, switchboards, lightning arresters, etc., are installed, and underneath the finished floor is a network of cables in iron and fiber conduit, all contained within a 12-inch thickness of hollow tile, resting on the supporting concrete slabs. This latter is an interesting feature due to the fact that by the use of a 12-inch hollow tile filler several advantages are obtained. After the supporting concrete floor slabs have been completed the conduits are run in their proper location above this level. It has often been customary to fill the space from the structural floor level to an inch or two above the conduits with concrete, thus adding an additional dead load as well as making access to the conduits difficult. By the substitution of the hollow tile for a concrete fill, the dead weight is materially reduced and the conduits are more accessible should it at any time be necessary to reach them.

Adjoining the operating room are several offices and a washroom for the operators.

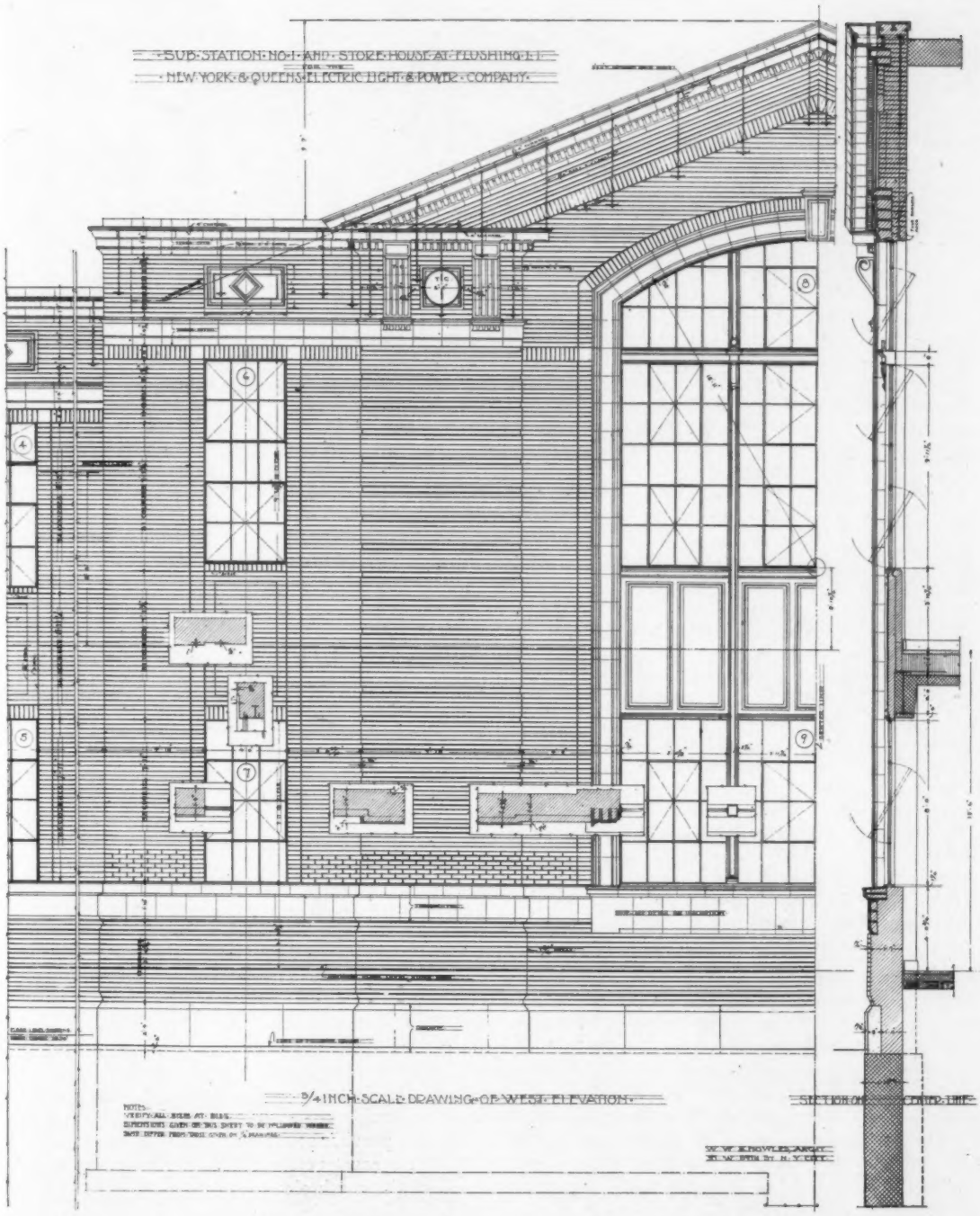
No general excavation of the lot was made, but at the rear a basement is provided for accommodating the boiler-room and providing coal storage space. The heating plant is used for the heating of both this building and others located on the same property.

The building is very heavily loaded and the foundations rest on soil but five feet above mean high water, and only one hundred feet back from Flushing Creek. As there was some doubt as to the bearing capacity of the sub-soil under these conditions, an actual test was made to determine the safe allowable load which might be placed thereon, also to determine whether the spread-footing type of foundation or a pile foundation would be best adapted to the conditions.

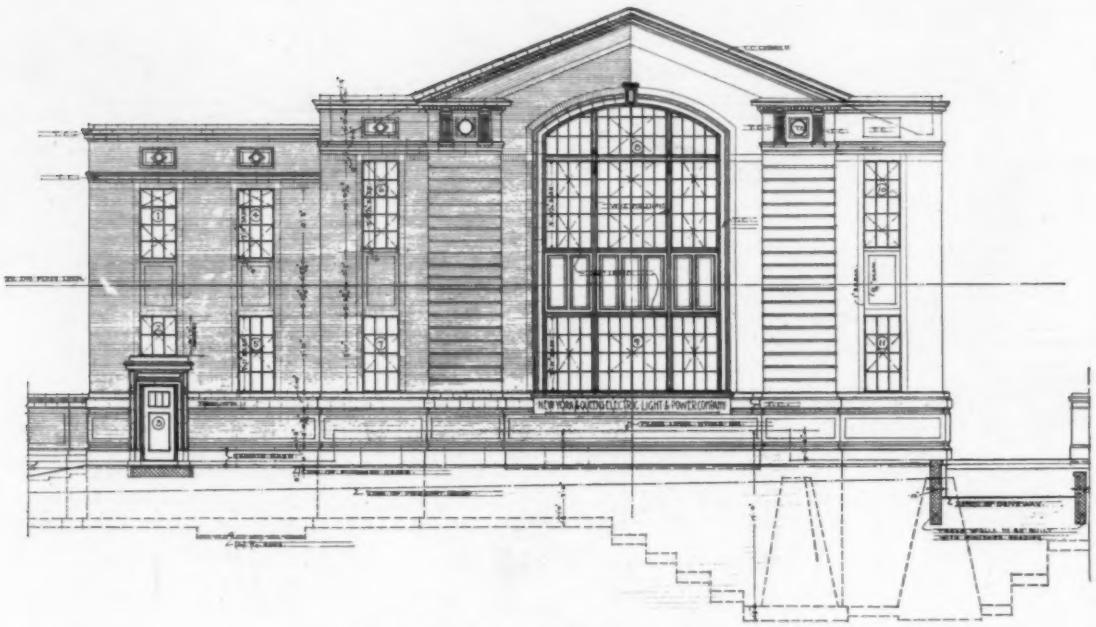
As a result of this test it was found that the soil could be safely loaded to three tons per square foot, and therefore the spread-footing type of foundation was found to be most suitable. The foundation plan shows in general the layout of these, which are of reinforced concrete, with cast iron bases



NORTH ELEVATION, SHOWING EMERGENCY TRUCK ENTRANCES


SUB-STATION NO. 1 AND STORE HOUSE AT FLUSHING L.I.
FOR THE
NEW YORK & QUEENS ELECTRIC LIGHT & POWER COMPANY.
3/4 INCH SCALE DRAWING OF WEST ELEVATION.
SECTION ON CENTER LINE
NOTES.
VERIFY ALL ITEMS AT SITE.
WM. W. KNOWLES, ARCH'T.
30 W. 34TH ST. N. Y. CITY.

LARGE SCALE DRAWING OF FRONT ELEVATION
FLUSHING SUB-STATION, NEW YORK & QUEENS ELECTRIC LIGHT & POWER CO.
WILLIAM W. KNOWLES, *ARCHITECT*



FRONT OR WESTERLY ELEVATION

transmitting the load from the steel columns to the footings proper.

The building is of skeleton steel construction with reinforced concrete short span floor slabs and roof panels. The walls are of brick faced on the outside with tapestry brick and trimmed with architectural terra cotta. The window frames and sash are of steel. The method of anchoring the terra cotta trim is shown in the construction details and in the large scale drawing of the west elevation. It will be noted that ⅝-inch diameter rods four feet long are used to anchor the terra cotta coping to the brick masonry below.

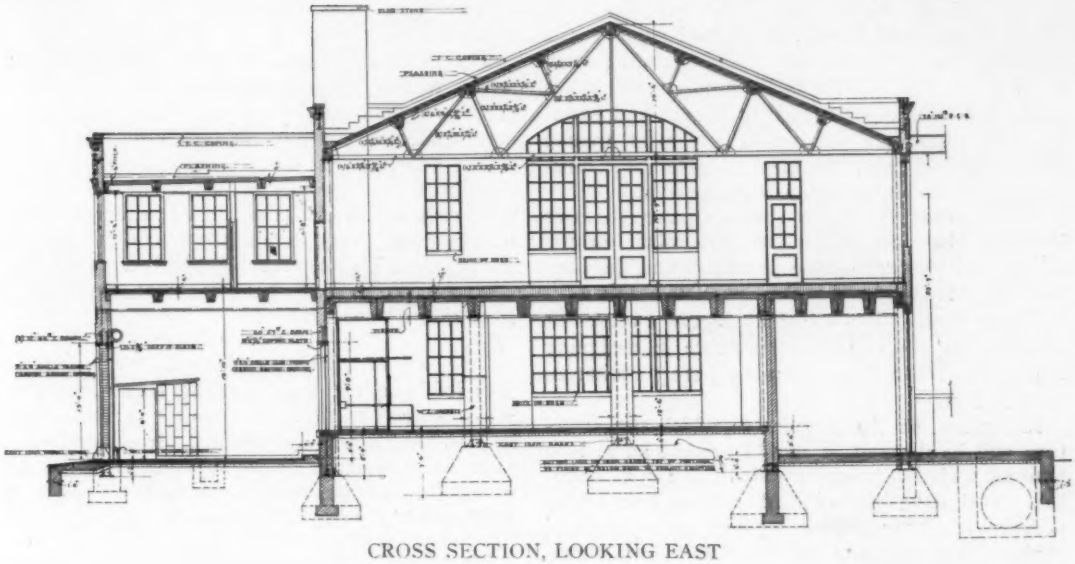
The coarse aggregate of all concrete consisted of broken trap rock. As the building was constructed during a severely cold winter, it was deemed advisable to discontinue the pouring of the reinforced concrete roof slabs. Some of the roof slabs had already been poured during freezing weather and for this reason it was considered advisable to conduct a test upon these in the spring. This test proved most satisfactory. Each of the roof slabs tested deflected but a small fraction of an inch under the full load, and returned completely to the normal position after the load had been removed.

Among the novel features incorporated in the design is the construction of the south drive in front of the transformer compartments. The level of this is truck high from the street, and a great iron eye-bolt is anchored in the opposite end of the drive to provide a purchase for pulling the transformers in place from the trucks to their proper location in front of the compartments. A free-standing trussed upright on the property line supporting a hoist beam overhead is provided for lifting the transformers and removing their coverings. This is shown at the right of the drawing on page 195 and can also be seen in the photograph of the south elevation. This arrangement was of material aid in placing these heavy transformers.

Beneath the drive there is located a 2000-gallon tank used for the drawing off, by gravity, of the oil from the oil-cooled transformers. In one of the compartments a small tank and pump are provided for the refilling of the transformers after the cleaning of the oil or the repairing of the transformer. The location of this tank is shown at the right hand of the cross sectional drawing.

The front of the transformer compartments is of portable construction, to permit the passage of the transformers, and it is made up entirely of louvres to provide proper ventilation during operation. This construction can be seen in the photograph of the south elevation.

The roof over the operating room is supported by five steel roof trusses having a clear span of 65 feet, and supported by steel columns at each end. The size of the members is shown on the cross sectional drawing. From finished floor of



CROSS SECTION, LOOKING EAST

operating room to lower chord of roof truss is 14 feet 9 inches and the trusses have a rise of 14 feet 6 inches. The operating room is provided with windows on all sides which furnish ample light and ventilation, thus eliminating the necessity of roof lighting and the possibility of a rain leak, which would be likely to cause considerable damage to the equipment and also interference with the electric service, which is an important consideration.

At the easterly end of the operating room large sliding doors are provided with a platform and overhead crane beam for lifting equipment into the operating room. This construction can be plainly seen in the east or rear elevation. There is also a lifting crane beam in one corner for the handling of repair equipment. A cross section through the loading platform showing the construction at this point is shown in one of the construction details.

LONGITUDINAL SECTION, LOOKING NORTH

The interior finish of the entrance vestibule, stair hall and offices is plastered and painted; the trim and doors are kalamein. The operating room is lined with a smooth buff brick and all other rooms are finished with cement plaster and painted. All floors are finished with cement treated with a dustless paint treatment to make same dustproof, and provided with a sanitary base.

In both the designing and equipment of this building, every precaution has been taken for the safety and comfort of the operators and the linemen, in order to guard against possible accidents.

There would seem to be no logical excuse for disregarding the esthetic appearance in designing that class of buildings which are purely utilitarian in character.

Regardless of the purpose to which the structure will be devoted, it should present an artistic exterior and also one which shall, so far as possible, reveal some indication of the character of its occupancy. While preserving both an artistic and dignified appearance, it should be free from excessive ornamentation; the simpler the lines the better is the true intent carried out.

It will be found that by careful planning very little, if any, additional cost, but much benefit, will result.

It is gratifying to note that architects are more and more comprehending this need and it is not too much to predict that industrial architecture of the future will attain high rank.

More Than One Billion Dollars Spent for Buildings by Construction Division of U. S. Army

IN an interesting and enlightening paper prepared by Brigadier-General R. C. Marshall, Jr., Chief of the Construction Division, U. S. A., and read at Franklin Institute by Col. G. R. Solomon of the engineering branch of that division, the tremendous task accomplished by this branch of the army was set forth.

When one stops to consider what spending a billion dollars for buildings in the space of a year and a half means, some realization of the magnitude of the work can be had. Perhaps the outstanding feature in connection with the work of the construction division was the speed of accomplishment. Time meant everything, delay might mean defeat. Draft boards were calling men, and the cantonments must be ready to receive them. Gigantic warehouses had to be built at terminal ports for storage of overseas shipping. Perhaps in no other country but America was such work possible of accomplishment.

Abstracts from Brigadier-General Marshall's paper follow:

The work of the construction division during the world war is so far-reaching in extent that it is possible to touch only on the more important of its accomplishments in any reasonable length of time.

The construction division undertook and had completed or under way at the time of the armistice 535 construction operations in 444 different localities, covering every state in the Union but one. In the course of eighteen months it had expended about $800,000,000, and to date its total expenditures total over $1,000,000,000.

* * *

The basis on which the construction division was founded was the then existing construction and repair branch of the quartermaster-general's office, headed by Colonel (afterward Brigadier-General Isaac W. Littell, which was charged with the duty of handling all construction, maintenance and repair work at army posts throughout the country.

* * *

On May 17, 1917, the secretary of war assigned to Colonel Littell the task of building the national army cantonments and national guard camps. He was relieved of his former duties and given authority to form his own organization and to report direct to the Secretary of War. It was only through the latitude allowed him that it was possible to accomplish the results required.

Immediately the field of effort broadened and construction of every character, including not only camps for training purposes but arsenals and industrial plants of all kinds, had to be built, as well as hospitals for the sick and wounded and port terminals for handling troops and supplies to be sent abroad.

* * *

With populations ranging from 5000 to 60,000 people, it became necessary to provide these various projects with the most up-to-date systems for the disposal of sewage. It was necessary to cut down the time of construction to the lowest point and at the same time provide disposal plants that could be counted on to run efficiently and with a minimum upkeep cost. The plants designed by the construction division accomplished this.

* * *

What the results obtained by these facilities will be, taken in connection with the merchant marine coming into being in this country and the renaissance of commercial manufacturing which must presently assume tremendous proportions, cannot yet be stated, but their value should be incalculable and their importance to the commercial enterprises of America almost beyond computation. That they have been produced and are ready for utilization is the result of the initiative, the brains and the resourcefulness of the American army.

Walls Stained with Cabot's Stucco Stains. Bigelow & Wadsworth, Architects, Boston.

CABOT'S
Waterproof Stucco Stains

Soft, Artistic and Durable Colors
Completely and Permanently Water-proof

These stains cure both of the great defects of cement as a building material, i. e., its porous character and its cold, cheerless monotony of color. They thoroughly water-proof the surface and color it in soft, rich tones without covering or spoiling the texture. They are not "painty" and cannot crack, or chalk, or peel. They are cheap, easy to apply and beautiful.

You can get Cabot's goods all over the country. Send for stained wood samples and name of nearest agent.

SAMUEL CABOT, Inc., MFG. CHEMISTS BOSTON

1133 Broadway, NEW YORK 24 West Kinzie St., CHICAGO

Cabot's Stucco and Brick Stains, "Quilt," Damp-proofing, Conservo Wood Preservative, etc., etc.

TUDOR-STONE

and its **Color**

Parallel with texture and craftsmanship are the *Colors* of Tudor-Stone. They are all nature's colors, not the added pigments of artificial products, but colors such as nature produces. Both fixed and weathering colors are available and our service is always ready to explain what Tudor-Stone can do.

THE RISING & NELSON SLATE CO.

Since 1869 Miners and Makers of High-grade Roofing Slates

Quarries and Main Office, West Pawlet, Vermont

Architects' Service Department, 101 Park Avenue, New York

CHICAGO BOSTON

"CENTURIES OF SERVICE"
PYRAMID NATURAL SLATE STRUCTURAL

Proof against *Time-Wear-Water-Fire*

In a Class by Itself for Exacting Requirements

PYRAMID STRUCTURAL SLATE

Wherever work calls for imperishable slabs of tough, non-absorbent, non-expanding, non-contracting, fire-proof, economical material, there is but one answer—Structural Slate.

Write for the first of a series of chapters on Structural Slate—its origin, sources, characteristics, surfaces, finishes and uses. Prepared by The Structural Service Bureau of Philadelphia in co-operation with the Slate Industry.

MAILED UPON REQUEST

The STRUCTURAL SLATE COMPANY

PEN ARGYL PENNSYLVANIA

Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York, Chicago, San Francisco, Seattle, and Birmingham follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT to afford an accurate review of market conditions, rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted, but will also present a basis to judge conditions as affecting correlating materials.)

	New York	Chicago	San Francisco	Seattle	Birmingham
BRICK					
Common	$30.45	$14.00	$16.00	$18.00	$28 00
Face brick	55 00 to 60.00	30.00 to 40.00	50.00 to 55.00	23.00	45.00
BURNED CLAY (Delivered on Job)					
Block partition:					
3 in., per sq. ft.	0.13	0.10	.....	0.10½	.....
4 in., per sq. ft.	0.15	0.11	.....	0.10	.....
Wall coping (single slant):					
8 in., per lin. ft.	0.16	0.18	.....	.....	0 32
12 in., per ft.	0.26½	0.27	.....	.....	0.32
18 in., per ft.	0 54	0.54	.....	.....	0.52
(Corners and angles four times the price of one foot of coping the same size)					
CEMENT					
Per bbl. in 15-cent bags (rebate 60 cents per bbl. for bags)	3.40	3.25	3.63	4.25	4.50
FINISHED IRON AND STEEL (Mill Shipments)					
Bar iron, refined grade	.....	.....	.....	.....	.....
Bar iron, double refined	.....	.....	.....	.....	.....
Soft steel bars	2 62 to 4.77	.....	.....	.....	3.50
Shapes	2.72 to 4.27	.....	.....	.....	.....
GLASS (Discounts from Manufacturer's Price Lists)					
Single strength, A quality, first three brackets	75%	77%	.....	.....	.....
Single strength, B quality	75%	77%	.....	83%	.....
Double strength, A quality	77%	79%	.....	83%	.....
Double strength, B quality	79%	79%	.....	.....	.....
GYPSUM					
Plaster board:					
27x28x1	.....	.....	.....	0.36	.....
27x48x ½	0.45	.....	.....	.....	.....
32x36x ¼	0.28	0.24	.....	.....	0.40
32x36x ⅜	0.29	0.26	.....	0.36	.....
32x36x ½	0.35	.....	.....	.....	.....
Plaster blocks:					
2 in. solid, 12x30, per sq. ft.	0.13	0.12	.....	.....	.....
3 in. hollow, 12x30, per sq. ft.	0.13	0.12	.....	.....	.....
4 in. hollow, 12x30, per sq. ft.	0.14	0.13½	.....	.....	.....
6 in. hollow, 12x30, per sq. ft.	0.21¾	0.20	.....	.....	.....
HOLLOW TILE					
2x 8x12 partitions, per 1,000 sq. ft.	98.80-111.10	.....	80.00	.....	.....
3x12x12 partitions, per 1,000 sq. ft.	148 20-165.10	110.00	108.00	105.00	112.00
4x12x12 partitions, per 1,000 sq. ft.	166 70-185.70	118.00	125.00	120.00	126.00
6x12x12 partitions, per 1,000 sq. ft.	222.30-247.60	162.20	154.50	170.00	168.00
8x12x12 partitions, per 1,000 sq. ft.	.....	221.10	222.50	230.00	224.00
10x12x12 partitions, per 1,000 sq. ft.	.....	272.70	276.00	.....	.....
12x12x12 partitions, per 1,000 sq. ft.	.....	316.90	.....	.....	.....
2x12x12 split furring, per 1,000 sq. ft.	92.60-103.20	73.80	108.00	.....	.....
LATH					
Eastern spruce, per thousand	18.00 to 20.00	16.00 to 18.00	18.00	14.50	.....
No. 1 white pine, per thousand	15.00 to 18.00	16.00 to 18.00	20.00	.....	.....
No. 1 hemlock, per thousand	15 00 to 18.00	.....	18.00	.....	.....
No. 1 yellow pine, per thousand	15 00 to 18.00	16.00 to 18.00	18.00	.....	20.00
LIME					
Common, 200 lb. bbls., per bbl.	3.80	.....	.....	2.85	2.50
Finishing, 300 lb. bbls., per bbl.	19.50	1.75	.....	3.25	2.50
Hydrated, in paper bags, per ton	4.00	20.00	.....	25.00	2.50
LUMBER (Retail Prices per Thousand Delivered)					
Yellow pine, No. 1 boards, 1x6	80.00	.....	.....	.....	120.00
Yellow pine, B. and better flooring (plain)	130 00	95.00	.....	.....	130.00
Douglas fir, 6x6 to 12x12	80.00	135.00	.....	.....	.....
Oak, quartered, 1 in., F. A. S.	325.00	77.00	60.00	36.00	.....
Oak, plain, 1 in., F. A. S.	225.00	370.00	500 00	.....	.....
Oak flooring, ⅬⅬ quartered, white	220.00	260.00	320.00	.....	.....
Maple, 1 in., F. A. S.	180.00	370.00	470 00	.....	.....
Maple flooring, ⅬⅬ clear	175.00	185.00	270.00	.....	.....
Mahogany, 1 in., F. A. S.	.....	225.00	225.00	.....	.....
Spruce, 10 in.	85.00	400.00	500.00	.....	.....
Cypress, 1 in., F. A. S.	150.00	80 to 140	96.00	.....	.....
		150.00	.....	.....	.....
METAL LATH					
Under 100 sq. yd., per sq. yd.	0.40		.....	0.40	0.42

DEPENDABILITY

ATLAS-WHITE
is a true Portland Cement; pure white in color and therefore ideal for the finish coat of all-white stucco. Its higher accentuation of the values of color aggregates in the production of various color tones is still another reason for using Atlas-White—On The Job.

THE ATLAS PORTLAND CEMENT COMPANY

New York Boston Philadelphia Savannah
Chicago Dayton Minneapolis Des Moines St. Louis

Upon request we will promptly send to architects one or all of three books: "Color Tones in Stucco," "Non-Staining Mortar for Pointing, Setting and Backing," "Cast Stone."

ATLAS WHITE

Late Quotations in Building Material Markets—*Continued*

	New York	Chicago	San Francisco	Seattle	Birmingham
PIPE					
Cast iron:					
6 in. and heavier	$67.30	$72.00	.....	.....	$66.00
4 in.	73.30	75.80	.....	.....	.....
3 in.	.....	82.80	.....	.....	.....
(And $2 additional for Class A and gas pipe)					
(Discounts to jobbers for carload lots on the Pittsburgh basing card; freight rates from Pittsburgh to New York, and also from Pittsburgh to Chicago, in carloads, per 100 lbs., are 27c. An additional 5 per cent discount is allowed to large jobbing interests over those listed below.)					
	F.O.B. Pittsburgh Butt Weld	F.O.B. Chicago			
Wrought:					
Steel:					
Black, ⅛ to 3 in.	47 to 54 %	38 to 45.1%	.....	.....	.....
Galv., ⅛ to 3 in.	20½ to 41½%	10.1 to 30.1%	.....	.....	.....
Iron:					
Black, ⅛ to 1½ in.	1 to 34½%	11.9 to 22.6%	.....	.....	.....
Galv., ⅛ to 1½ in.	+25 to 18½%	+39.9 to 4.6%	.....	.....	.....
	Lap Weld				
Steel:					
Black, 2½ to 6 in.	50 %	41.1%	.....	.....	.....
Galv., 2½ to 6 in.	37½%	27.1%	.....	.....	.....
Iron:					
Black, 2½ to 6 in.	30½%	18 %	.....	.....	.....
Galv., 2½ to 6 in.	17½%	3.6%	.....	.....	.....
PLASTER					
Neat wall cement in 15-cent bags, per ton	23.50	20.00	$18.50 to 20.00	22.50	24.00
Finishing plaster	25.00	20.50	19.50 to 21.00	24.00	24.00
Lath mortar, in cloth bags, per ton	16.50	.....	.....	.....	.....
RADIATION					
Discount from list on standard heights	45%	41 to 42	.....	.....	44.45
REINFORCING BARS					
High carbon steel from mill	48.50	.....	4.50 to 5.50	5.00	.....
Medium steel from mill	48.50	.....	4.50 to 5.50	5.00	4.50
ROOFING MATERIAL					
Tarred felt paper:					
No. 1—25 lbs. to 100 sq. ft., per ton	81.00	90.00	.....	2.50 per cwt.	.....
No. 2—16 lbs. to 100 sq. ft., per ton	81.25	90.00	.....	3.25 per cwt.	.....
No. 3—12 lbs. to 100 sq. ft., per ton	81.63	90.00	.....	3.39 per cwt.	.....
Rosin sized sheathing, per ton	75.00	.....	.....	105.00 per cwt.	.....
Corrugated roofing, galvanized, 2½ in. corrugation, over flat sheets, per 100 lbs.	0.30	.....	.....	.....	.....
SHINGLES					
Red cedar, 5 to 2, clear, per thousand	15.00	10.00	16.00	7.15	.....
White cedar, extra star, A star, per thousand	16.00	9.50	17.00	5.75	.....
SLATE ROOFING					
	F.O.B. Cars Quarry Station				
Pennsylvania:					
Best Bangor	$7.75 to $9.00	.....	.....	.....	.....	9.00 to 18.00
No. 1 Bangor Ribbon	6.75 to 7.00	.....	.....	.....	.....	.....
Pen Argyl	6.50 to 7.25	.....	.....	.....	.....	.....
Peach Bottom	10.50 to 12.50	.....	.....	.....	.....	.....
No. 1 Chapman	6.25 to 7.25	.....	.....	.....	.....	.....
Vermont:						
No. 1 Sea Green	4.25 to 6.75	.....	.....	.....	.....	27.00
Unfading Green	9.00 to 10.50	.....	.....	.....	.....	27.00
Red	12.00 to 20.00	.....	.....	.....	.....	30.00
Maine:						
Brownsville, U'f'g Black, No. 1	12.00	.....	.....	.....	.....	.....
Slaters' felt, 30 lb. roll	0 92	.....	.....	.....	.....	3.00
Slaters' felt, 40 lb. roll	1.22	.....	.....	.....	.....	3.25
STRUCTURAL STEEL						
Beams and channel, 3 to 15 in., per lb.		3.47	3.47	4.55 to 5.00	4.70 to 5.00	0.05½
Beams and channel, over 15 in., per lb.		3.57	3.57	4.55 to 5.00	.....	0.05¾
Angles, 3 to 6 in.		3.47	3.47	4.55 to 5.00	4.10	0.05
Zees and tees		3.57	3.47 to 3.52	.....	.....	.....
Steel bars, half extras, from mill		.....	.....	4.90	4.00	4.25
STUCCO						
In cloth, per ton (white, mixed)		22.50	20.50	.....	.....	.....
STUCCO BOARD						
Medium weight stucco board, plain, per thousand sq. ft.		42.50	65.00	.....	.....	60.00
Medium weight stucco board, creosoted, per thousand sq. ft.		50.00	70.00	.....	.....	.....
Heavy weight stucco board, plain, per thousand sq. ft.		55.00	75.00	.....	.....	.....
Heavy weight stucco board, creosoted, per thousand sq. ft.		60.00	80.00	.....	.....	.....
Medium weight stucco board, plain, narrow key, per thousand sq. ft.		50.00	75.00	.....	.....	.....
Medium weight stucco board, narrow key, creosoted, per thousand sq. ft.		55.00	70.00	.....	.....	.....
Insulating board, heavy felt background, per thousand sq. ft.		50.00	70.00	.....	.....	.....
SHEATHING BOARD						
Heavy weight, sheathing board, per thousand sq. ft.		50.00	70.00	.....	.....	65.00
Medium weight sheathing board, per thousand sq. ft.		46.00	63.00	.....	.....	.....
Stucco or plaster board, sheathing board and insulating board are in rolls containing one sheet 25 ft. long and 4 ft. wide (100 sq. ft.).						
WALL BOARD						
Wall board, shipped any length, 4 ft. wide, per thousand		45.00	50.00	.....	46.00	53.00
Packed flat in cars if ordered in less than car lots. Add $5.00 per thousand ft. for crating.						